The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 674.—Vol. XVIII. LONDON, SATURDAY, JULY 22, 1848. [Price 6d.

VALUABLE COLLIERY PLANT—At EVENWOOD and GORDON, near WEST AUCKLAND, in the county of DURHAM.

Mr. G. HARDCASTLE is instructed to SELL, BY AUCTION, on Monday, the 24th July, 1848, and following days, the whole of the

VALUABLE COLLIERY PLANT:

ENGINES, RAILWAYS, WAGGONS, TRAM-PLATES, PUMPS, SCREENS, APPARATUS, Storehouse stock, contents of joiners' and blacksmiths' shops, metal, iron, timber, &c., and all the other articles used in and about a large colliery establishment.

The Sale to commence at Ten for Eleven each day.—Refreshments for purchasers.

Catalogues may be had on application to Wm. Brogden, Esq., Stockton; Mr. Barker, Coxhoe; or to the auctioneer, Newcastle and Sunderland.

*** A coach from Shildon to the colliery at 9.15 A.M., and from the colliery to Shildon, in time for the evening trains.

EXTENSIVE AND VALUABLE MINERAL PROPERTY AND IRON-WORKS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, THE VENALLT COAL AND IRON-WORKS,

Situate on the south side of the RIVER NEATH, GLAMORGANSHIRE, about 8 miles from the port of Neath, and 14 from the port of Swansea, with all the necessary appendages for carrying on the smelting of iron, and an extensive shipping trade of stone coal and stone coal culm.

The property comprises long leases of coal and ironstone, extending over about 3000 acres of land, in a ring fence, which are taken on favourable terms. The coal is anthracite, and three veins of an aggregate thickness of about 25 feet, are effectually opened by level, for the supply of 100 to 200 tons per day.

The ironstone veins are abundant and rich, and sufficiently opened by level to yield an ample supply for three furnaces. There is also valuable black-band extending over a large acreage.

The works consist of an engine-house for a pair of engines, one 50-horse high-pressure blowing-engine, two blast-furnaces, with all the necessary hot-blast stoves, casting-houses, foundry, finery, &c.

The works and colliery are in operation, and any persons who may be desirous of purchasing, will be treated with on liberal terms.

Reports recently made on the property, by Messrs. John Southan, of Bilston, and W. P. Struvé, of Swansea, may be seen on application to Messrs. Jevons and Wood, Neath; Messrs. Llewellyn and Randall, solicitors, Neath; or to Messrs. Rowland, Hacon, and Rowland, solicitors, 38, Threadneedle-street, London.

HERODSCOOMBE MINE.—FOR SALE, BY PRIVATE CONTRACT, HERODSCOOMBE MINE MATERIALS, either together or in separate lots, consisting of—

3 9-feet 7-inch pumps	1 Balance-bob
1 9-feet 6-inch working barrel	1 Shaft-bob
1 6-feet 6-inch doorpiece	2 Traveller-bobs
1 9-feet 6-inch windbore	Horizontal wood sweep-rod
1 Horse-whim	30 Fathoms 2-inch square iron-rods
2 4-feet whim-shieves	2 Winze kibbles
2 Horse kibbles	1 Large stool—and

A 16-inch cylinder DIRECT DOUBLE-ACTING ROTARY STEAM-ENGINE and BOILER, complete, with pumping and drawing apparatus attached.

This engine is in excellent condition—was erected new, about 18 months since, and the rotary and pumping apparatus about nine months, from the drawings, and under the superintendence of Messrs. Hocking and Loam, engineers; and, for cheapness of construction, efficiency, and economy, has given the most entire satisfaction.

Parties in want of an engine to sink 40 or 50 fathoms for trial, will find this one well adapted for that purpose; and should the trial prove satisfactory, and a larger pumping-engine be required, this can be applied wholly to drawing and crushing, with no expense, as her construction will admit of her being first placed in a proper position, at a distance from the shaft.

All particulars may be had of Mr. Matthew Loam, engineer, Liskeard, to whom all tenders, stating the highest prices, must be addressed.

TO BE SOLD, OR LET, a valuable COAL MINE, in the township of GREAT HARWOOD, in the county of Lancaster. The mine has been recently proved, and found to be 3 feet 2 inches in thickness, and of excellent quality; it is commonly called, or known, by the name of the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots.

The property is situated between the towns of Blackburn and Clitheroe, and is intersected by a branch of the East Lancashire Railway.

A section of the borings may be seen, by applying to Mr. Boosie, Rufford-hall, Ormskirk; or to Mr. Whittle, coal viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

ROCKS TIN MINING COMPANY.—PROSPECTUSES, with FORMS of APPLICATION FOR SHARES, may be OBTAINED at the company's offices, 37, Old Broad-street, London. CHARLES RAGGETT, Sec.

CORNWALL NEW MINING COMPANY.

Capital £100,000, divided into 20,000 shares, of £5 each.

Incorporated in pursuance of the Statute of 7 and 8 Victoria, cap. 110.

Bankers—London and County Bank, 21, Lombard-street.

The CORNWALL NEW MINING COMPANY is ESTABLISHED to WORK a series of TIN and COPPER MINES, chiefly in the district of ST. IVES, which has hitherto afforded a larger profit on its return of ore than any other part of the county.

In pursuance of this plan, five have been already selected—viz.: Georgia Tin Mines, Trewortha Tin and Copper Mine, Bray Tin and Copper Mine, Trevarno Tin and Copper Mine, and Wheal Squire Tin and Copper Mine—with whose owners the directors have succeeded in making such advantageous arrangements, as to enable them to work one or more with even a small portion of the proposed capital.

The directors beg to announce, that they are NOW ALLOTING the SHARES in the above company; and, from the number already disposed of, they request parties desiring to take shares to make early application. Those to whom allotments have been made, are requested to pay their deposits into the bankers of the company, as above.

The Deed of Settlement having been executed by the required number of shareholders to incorporate the company, parties who now take shares will not be required to sign it, or enter into any personal liability for calls or otherwise, although reserving their full rights as shareholders.—Office, 17, Essex-street, Strand. GEO. LOCKWOOD, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, No. 2, Moorgate-street, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 6d.

PATENT ALKALI COMPANY'S IRON PAINT.—This PAINT, now first offered to the public, is the PRODUCT of a PATENT PROCESS, and possesses VALUABLE and PECULIAR QUALITIES, not otherwise attainable. Its colour is a purple-brown—it is perfectly innocuous—is far more durable than lead paint, and two coats are fully equal to three of any other paint. A single coat will be sufficient to demonstrate this. It dries rapidly, and its durability is very great.

From its chemical composition, it is especially, and above all other paints, adapted to covering iron; also wood, and stuccoed, or brick walls. The peculiar oxidation of the base of this paint makes it impossible that further change should take place in its composition. Its identity with iron secures it from galvanic action, so injurious to the durability of lead paints on iron work. It has been exposed on shipping to the action of sea-water, and the sulphuretted hydrogen, so prevalent in sea-ports and tidal harbours, for three years, without change.

Its *cheapness* and *strength* render it admirably adapted for iron railings, farm buildings, and shipping. It will also cover creosoted timber. Price, by the ton, £20, delivered in London. All orders to be addressed to the offices of the company, 20, Fenchurch-street, London; where testimonials may be seen as to the value of the paint.

EVANS, BROTHERS, Agents.

VALUABLE INVESTMENT.—PARTNERSHIP or LICENSES FOR DISTRICTS OR ENTIRE COUNTIES.

Under British and Foreign Letters Patent.

HUTCHISON & CO.'S INDURATED AND IMPERVIOUS STONE, CHALK, SAND, PLASTER OF PARIS WORKS, CARTON ROOF SHEETING, AND WOOD, &c.

The produce supersedes all other building and decorative materials, for richness of effect, cheapness, and perfect durability.—Specimens to be seen at the chief offices, East Temple Chambers, 2, Whitefriars-street, Fleet-street, London; also at the Indurated Sandstone Works, Tonbridge Wells, Kent; or *à la Maladrérie*, near Caen, France.

All particulars afforded at H. and Co.'s offices; or of Mr. William Hutchison, Castle Hotel, Tonbridge Wells, Kent.

THE PATENT OFFICE AND DESIGNS REGISTRY,

No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

EMIGRATION AND COLONIZATION.—IMMIGRATION being much required in AUSTRALIA, NEW ZEALAND, &c., and as the supposed expense of an OUTFIT often prevents individuals emigrating, S. W. SILVER, & CO., CLOTHIERS, OUTFITTERS, and CONTRACTORS (having a large interest to maintain in those colonies), have been advised to make known that they can supply OUTFITS for MALE or FEMALE emigrants from £4 (*net*) upwards, or less when needful—and for children in proportion—at No. 4, BISHOPSGATE-STREET WITHIN, opposite the London Tavern.

S. W. S. & Co., being the makers of nearly every article in *all* the outfits they supply, and as one of their objects is to promote emigration, they neither receive from agents, nor pay the too usual commission to any person introducing passengers to be fitted out, so that the passage and outfit may be procured at the *least* possible expense; but they will, on application, advise passengers how to obtain the *most economic passage to the colonies*. They have a *representative* in every Australian colony, to whom they ship clothing monthly; thus they would forward small parcels free of expense.

NAVAL and MILITARY OFFICERS, MIDSHIPMEN, CADETS, CIVILIANS, LADIES, &c., are outfitted as heretofore, at the CABIN-PASSENGER OUTFITTING WAREHOUSE, Nos. 66 and 67, CORNHILL (the emigration outfitting being exclusively at 4, BISHOPSGATE-STREET WITHIN), London, and each branch at ST. GEORGE'S CRESCENT, LIVERPOOL.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th; and from Suez on or about the 10th of every month.

For rates of passage-money, plans of the steamers, and to secure passages, apply at the company's offices, No. 122, Leadenhall-street, London.

NOTICE TO SHIPPERS OF GOODS AND PARCELS per PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY'S STEAMERS to INDIA and CHINA.—GOODS and PARCELS, sent direct to the company's Parcel-office, at or before 6 P.M. on the 17th of each month, are FORWARDED at less cost to the shipper than when sent through any intermediate channel. Cases must not exceed 112 lbs. weight each for Aden, Ceylon, Madras, Calcutta, and China; and 40 lbs. each case for Bombay. No package for India and China can, under any circumstances, be shipped at Southampton, unless it be cleared through the Custom-house, and placed alongside the steamer by noon on the 19th of each month. Detailed particulars can be obtained on personal application or by writing.—Parcel Department, 122, Leadenhall-street, May 13, 1848.

PATENT PNEUMATIC APPARATUS for the WORKING OF MINES—for the ASCENT and DESCENT of MINERS INTO PITS—EXTRACTING ORES and WATER—and also for VENTILATION.

The object of this patent is the economy in its application of raising ores and weights; at the same time that it is attended with security to life and economy of time. M. PUIS (the proprietor) having secured a PATENT, is ready to GRANT LICENSES for its USE, at a certain annual rate, or for a fixed sum.

All inquiries will be satisfactorily answered on application, personally or by letter, addressed to M. Puis, 32, Craven-street, Strand; Mr. English, 25, Fleet-street; or to the office of the *Mining Journal*, 26, Fleet-street, London.

*** Any proprietor, or gentleman interested in mining property, can obtain a description of Mr. Puis' invention, on application as above.

REVIVAL OF PASSENGER TRAFFIC ON TURNPIKE ROADS—RESUSCITATION of INNS, INNKEEPERS, and TURNPIKE TRUSTS.—PROSPECTUSES for raising a LOAN of FIVE THOUSAND POUNDS, in sums of £10 each, payable by instalments, in aid of the above national object, to be attained by means of Sir JAMES C. ANDERSON'S PATENT STEAM-CARRIAGE FOR COMMON ROADS (now rendered thoroughly effective), for which interest, at the rate of 15 per cent. per annum, will be paid half-yearly, and both principal and interest amply secured by mortgage, and without the lenders incurring the justly-dreaded liabilities of joint-stock companies, will be forwarded free (on the receipt of a postage-stamp), on application to Mr. Herbert, solicitor, 8, Heathcote-street, Mecklenburgh-square, London.

*** The line of road selected to commence running the carriages is from Hyde-park Corner to Hounslow, through Kensington, Hammersmith, Brentford, &c.

MODEL RAILWAY, at ROSEMARY BRANCH TAVERN, near PECKHAM.—TRIALS on the above, by COMPRESSED AIR, on the system of Mr. PIATTI, may BE SEEN DAILY, weather permitting, from Two to Four o'clock.—Peckham omnibuses, passing within 100 yards of the railway, leave Grace-church-street every 10 minutes, and meet at the Elephant and Castle.—The Atlas, Waterloo, and other omnibuses, from the West End.

BRISTOL AND EXETER RAILWAY.—The directors of this company are ready to RECEIVE APPLICATIONS from duly qualified parties, for the following appointments:—

A GENERAL SUPERINTENDENT AND MANAGER OF TRAFFIC.
A CHIEF ACCOUNTANT—and
A FOREMAN OF LOCOMOTIVE AND CARRIAGE WORKS.

Candidates for these offices are invited to send their applications (with testimonials as to experience and other essential qualifications) to the secretary, from whom all needful information may be obtained.

It is particularly requested, that no application may be made to individual directors.

By order of the board, J. B. BADHAM, Secretary.

Office, 30, Broad-street, Bristol, July 19, 1848.

SHREWSBURY AND BIRMINGHAM RAILWAY COMPANY.—LOANS ON DEBENTURES.—The directors of the SHREWSBURY AND BIRMINGHAM RAILWAY COMPANY are prepared to RECEIVE TENDERS OF LOANS, in sums of not less than £500, to be secured on the company's debentures.

By order, GEORGE KNOX, Secretary.

Offices of the Company, 3, Moorgate-street, London.

CALEDONIAN RAILWAY COMPANY—LOANS ON DEBENTURES.—TENDERS OF LOANS ON DEBENTURE BONDS are now RECEIVED in sums of not less than £500, for any number of years not exceeding five. Interest to be at the rate of 5 per cent. per annum, payable half-yearly, in London, Edinburgh, Glasgow, or in any country bank.

Tenders to be addressed to this office, giving full name and address of lender.—Parties may also communicate with Messrs. Foster and Braithwaite, 68, Old Broad-street, London.

By order, D. RANKINE, Treasurer.

Caledonian Railway Office, Edinburgh, Feb. 25, 1848.

CALEDONIAN RAILWAY.—At a SPECIAL GENERAL MEETING of the shareholders of the CALEDONIAN RAILWAY COMPANY, held pursuant to advertisement, within Gibb's Royal Hotel, Edinburgh, on Thursday, the 20th day of July inst., it was resolved,—

That the several sums of £50,000, £16,000, £450,000, and £150,000, which the company are authorised to raise under the powers of the Caledonian Railway (Glasgow, Garnkirk, and Coatbridge Branch) Act, 1846; the Caledonian Railway (Clydesdale Deviation) Act, 1846; the Caledonian Railway (Glasgow, Garnkirk, and Coatbridge Railway, purchase) Act, 1846; and the Caledonian Railway (Garnkirk Station) Act, 1847; and also the sum of £79,180, being part of the sum of £200,000, which the company are authorised to raise under the Caledonian Railway (Edinburgh Station and Branches) Act, 1847—making, together, the sum of £745,180—be raised by the creation of 74,518 shares, of £10 each, to be called £10 Guaranteed Shares, which shall be entitled to a fixed dividend of 7 per cent. per annum for five years, and 6 per cent. per annum in perpetuity thereafter, in preference to the dividends payable on the existing ordinary shares of the company, but without participating in any surplus dividends, or any future issues of shares or stock, or any other profit or benefit.

That the said £10 shares shall be paid up by the following instalments—viz:—

£2 10 0 per share, on the 21st day of August, 1848.
£2 10 0 per share, on the 21st day of October, 1848.
£2 10 0 per share, on the 21st day of December, 1848.
£2 10 0 per share, on the 21st day of February, 1849.

And that, after payment of the last instalment, the scrip notes shall be forwarded to the secretary of the company, to be exchanged for certificates of stock, registered in the name of the holder.

That every proprietor of existing shares, who shall be registered as such on the 25th day of July, 1848, shall be entitled to one of the said new shares, in respect of every £50 (nominal value) of the shares then standing in his name; provided he pays the first instalment of £2 10 per share on or before the 21st day of August, 1848, and each of the subsequent instalments within one calendar month after the date of its becoming due.

That subject, as after mentioned, the said new shares shall be entitled to dividends at the rate aforesaid, upon the several instalments, from the respective days herein before fixed for payment thereof, such dividends to become due in half-yearly portions, the first dividend falling due on the 21st day of February, 1849, and to be paid within one calendar month after becoming due.

That in case any instalment on any of such new shares shall not be paid on the day when due, interest at the rate of 5 per cent. per annum shall be charged upon the instalment so in arrear, until duly paid; and further, so long as any instalment shall be in arrear on any share, no dividend shall accrue in respect of the instalments paid on the same.

That every holder of such new shares who shall pay any of the instalments thereon in advance, shall be allowed discount at the rate of 7 per cent. per annum.

That the directors be authorised to take such steps, and make such regulations as they may deem necessary in reference to such new shares, in obtaining payment of the several instalments, and the forfeiture and disposal of such shares in respect of which the first or any subsequent instalment shall not be duly paid.

That the cordial thanks of the meeting be given to the chairman, for his able conduct in the chair.

J. J. HOPE JOHNSTONE, Chairman.
J. W. CODDINGTON, Secretary.

125, George-street, Edinburgh, July 20, 1848.

NOTICE—TO ZINC AND COPPER MANUFACTURERS, MERCHANTS, AND OTHERS.—WANTED, by a respectable, sober, and competent man, an ENGAGEMENT to go ABROAD, for a term of years, to undertake the MANAGEMENT of SMELTING and ROLLING of ZINC, and the ROLLING of COPPER. Can be highly recommended, for ability and industry, by gentlemen in whose employ he has been for a number of years.—Apply by letter (post-paid), addressed to "A. B.," 24, Little St. Thomas Apostle, Queen-street, City, London.

LAND DRAINAGE.—Mr. W. HUGHES, Civil Engineer, begs to announce, that he undertakes the INSPECTION of ESTATES to be DRAINED, the SETTING OUT of DRAINS, the RECLAMATION of LAND, and the GENERAL SUPERINTENDENCE of WORK, at a FIXED CHARGE PER ACRE, according to the extent of land.—Full particulars may be had on application to Mr. W. Hughes, C.E., at the office of the *Mining Journal*, 26, Fleet-street, London.

SPRINGBANK IRON-WORKS.—The FIRM of AITKEN, ALLAN, & CO., IRON FOUNDERS, KELVIN FOUNDRY, having some time since been DISSOLVED, Mr. ALLAN, in soliciting a share of the patronage formerly bestowed on him, begs to inform his former customers, and the trade in general, that the above WORKS are now in FULL OPERATION—capable of producing castings of every description, required for the Foreign, English, Irish, and Scotch markets—and that the BUSINESS will be CARRIED ON under the FIRM of

Springbank Iron-Works, Glasgow, July 3, 1848. THOMAS ALLAN & CO.

TO CAPITALISTS—SCIENTIFIC OR OTHERWISE.—WANTED, from FIVE HUNDRED to ONE THOUSAND POUNDS for securing PATENTS in FOREIGN PARTS, for several IMPORTANT INVENTIONS, about to appear before the public (for which the English patent has been obtained). Only part of the above amount is wanted immediately. Any party having the above sum at command will find this an excellent opportunity for the investment of capital, as ample security will be given, and the most liberal terms conceded to.—Apply to Mr. A. Campbell, 184, Fleet-street.

BOILER EXPLOSIONS.—JOSEPH SPENCER, ENGINEER and IRONFOUNDER, BILSTON, STAFFORDSHIRE, desires to inform all persons using STEAM-ENGINES, that he has constantly on hand a LARGE SUPPLY of his SAFETY WHISTLES, which can be fixed to boilers on the shortest notice.

ENGINES.—WANTED to PURCHASE, the following STEAM-ENGINES—viz.: ONE PUMPING-ENGINE, 60 to 80 inches steam cylinder, condensing with or without pumps, 14 inches, and pipes 15 inches, diameter: TWO WINDING-ENGINES, high-pressure, 26 inches steam cylinder each: ONE PUMPING-ENGINE, high-pressure, 24 inches to 26 inches steam cylinder, with or without 10 inches pumps and 12 inches pipes diameter; also an ENGINE, 18 inches cylinder, high-pressure.—Persons having any, or the whole, of the engines, as described above, are requested to furnish the particulars thereof to Mr. H. W. White, stationer, Merthyr Tydvil, stating the lowest price.

TO BE SOLD, BY PRIVATE CONTRACT, a THREE-CYLINDER CONDENSING-ENGINE, 16-horse power; also, an 8-horse HIGH-PRESSURE THREE CYLINDER ENGINE, working upon three-throw triangular cranks—thereby affording a steady and uniform motion, which renders them particularly applicable and well adapted for grist-mills, clothing-mills, or any machinery requiring a steady and even movement.—Address to Mr. Edmund Rudge, engineer, Church-street, Tewkesbury, Gloucestershire.

FOR SALE, BY PRIVATE CONTRACT—A single-acting PUMPING-ENGINE—cylinder 30-inch diameter, 9-feet stroke, equal beam, with 7-ton boiler, cisterns, spring beam, and first set of rod-shafts attached; being the engine of Wheal St. Cleer.—For particulars, apply to Capt. Osborne, Liskeard; Mr. West, engineer, St. Blazey; or Mr. Rendle, the purser, 13, Octagon, Plymouth.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.

Price—£12 to £16; with boiler, £22 per horse.

MINING.—TO MINING PROPRIETORS, COMPANIES, MINING SHAREHOLDERS, and MINE AGENTS of GOLD, SILVER, LEAD, TIN, COPPER, IRON, COAL, &c.—All letters addressed to

EVAN HOPKINS, C.E., F.G.S.,

Soliciting his OPINION and ADVICE on the PROSPECTS of any given MINE or any UNTRIED GROUND (the essential particulars being furnished), or to INSPECT and SURVEY, or to make PLANS, SECTIONS, and REPORTS on any MINING PROPERTY, are to be sent (for the present), to the care of the Editor of the *Mining Journal*, 26, Fleet-street, London, who will forward the same, and to which due and confidential attention will be paid without delay.

MINING SHARE OFFICE.—W. BAWDEN, of No. 2, BANK CHAMBERS, LONDON, MINE AGENT, of 21 years' standing, begs to call the attention of PURCHASERS of MINING PROPERTY to the following SHARES at this particular time—viz.: United Mexican, Bolanos, Del Reys, and Tamars, as there is, from present appearances, every rational prospect for purchasers realising from 50 to 200 per cent., in a few months, on their outlay.—W. B. will be most happy to give every information respecting these and other mining shares.—*Attendance daily from Ten to Four.*

MINING OFFICES—Established Five Years.—THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Phillips and Tiplady's).

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MR. R. TREDINNICK, THREE KING'S COURT, *LOMBARD-STREET, LONDON,*

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

MR. JAMES STRIDE'S MINING, SHARE, AND GENERAL AGENCY OFFICES, 27, *SPRING-GARDENS, LONDON.*

WILLIAM W. TAYLOR & CO., MINERAL SURVEYORS MINING SHAREBROKERS, &c.,

No. 2, ROYAL EXCHANGE-BUILDINGS, LONDON.

JAMES LANE, MINING SHARE DEALER,

75, *OLD BROAD-STREET, LONDON.*

REUBEN FARLEY, MINE AGENT, AND LAND AND MINE SURVEYOR, *WEST BROMWICH, NEAR BIRMINGHAM.*

AGENT to the NORTH OF ENGLAND FIRE AND LIFE INSURANCE COMPANY.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MONEY.—MESSRS. KILLICK & CO. (late Winstanley, Killick, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms; they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England.

AUSTRALIAN MINING COMPANY, 1, Adelaide-place, London-bridge, July 13, 1848.—The board of directors hereby give Notice, that, agreeably to the provisions of the Deed of Settlement, the THIRD ANNUAL GENERAL MEETING of the shareholders in this company will be HELD at this office on Monday, the 31st of July inst., at Twelve o'clock precisely, to receive and audit report, accounts, and balance-sheet, for the past year—to elect three directors, in lieu of three who go out by rotation, and to fill up the two vacancies occasioned by the resignation of Mr. Alderman Copeland and Edward Hagen, Esq., and to fix the remuneration of the present auditors for the past year. By order of the board, I. A. JOSEPH, Sec.

BAROSSA RANGE MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of this company will be HELD at No. 13, Bedford-row, in the county of Middlesex, on Wednesday, the 26th day of July inst., at Twelve o'clock at noon precisely.

July 17, 1848. COODE, BROWNE, & CO., Secretaries.

CONSOLIDATED COPPER MINES OF COBRE ASSO- CIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of proprietors of this association will be HELD at the office of the company, No. 26 Austinfriars, on Tuesday, the 25th July inst., at One o'clock precisely.

By order of the court of directors,

26, Austinfriars, July 6, 1848. WM. LECKIE, Secretary.

COPIAPO MINING COMPANY.—Notice is hereby given, that the ANNUAL MEETING of the shareholders in this company will be HELD at their office, 22, Austinfriars, on Thursday, the 27th inst., at One o'clock precisely.—At this meeting Heaton Ellis, Esq., and John Deacon, Esq., directors, will go out of office by rotation; but, being eligible, offer themselves for re-election.

By order of the directors,

22, Austinfriars, July 15, 1848. FREDK. GRELLET, Secretary.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY .....Namur and Liege Railway—London Tavern, at One.
MONDAY.....South Metropolitan Cemetery Co.—London-bridge House Hotel, Eleven.
Dutch Rhenish Railway—London Tavern, at Two.
Brighton and Continental Steam-Packet Company—offices, at Twelve.
TUESDAY.....Glen Osmond Union Mining Company—offices, at Two.
Consolidated Copper Mines of Cobre Association—offices, at One.
Vauxhall-bridge Company—George and Vulture Tavern, at Two.
Reliance Mutual Life Assurance Company—offices, at One.
WEDNESDAY...United Mexican Mining Association—offices, at One.
Holyford Copper Mining Company—offices, at Twelve.
Barossa Range Mining Company—offices, at Twelve.
Alfred Life Assurance Company—offices, at One.
THURSDAY.....Copiapo Mining Company—offices, at One.
London Reversionary Interest Society—offices, at Twelve.
FRIDAY..... ....Cameron's Coalbrook Steam Coal and Swansea and Loughor Railway—offices, at One.
Alliance Gas Company—offices, at Two.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

SWANSEA DOCK COMPANY.

The annual meeting of proprietors in this company was held at Radley's Hotel, New Bridge-street, Blackfriars, on Thursday last, the 20th inst.

Capt. EVAN MORGAN, R.N., in the chair.

Mr. FRANCIS (the secretary) read the notice convening the meeting, and the directors' report, which, after congratulating the proprietors on the settlement of the differences which had unfortunately existed, proceeded to state that, in consequence of the commercial crisis which had taken place, and the tightness of the money market, great difficulties had been met with in filling up the share list; the great importance of the docks to Swansea and its neighbourhood was as fully admitted as ever; and, although there was some backwardness in the payment of calls, there had been sufficient received for pressing emergencies; yet the time must soon arrive when it would be obligatory to press for payment of the arrears. The secretary had willingly resigned a large portion of his salary—viz.: from 300*l.* to 100*l.* per annum—until the company should be placed in a more favourable position. The absolute necessity for the completion of the docks was more than ever admitted; and particularly shipowners, and others connected with the Australian trade, were anxiously watching the progress of the company. So impressed with the importance of the measure were the members of the corporation of Swansea, that they had passed a resolution, expressive of the desirability of conveying to the company the land required by them on liberal terms.

From the balance-sheet, it appeared that the total receipts on calls, &c., amounted to 5998*l.* 8s. 7d.; and expenditure, 4850*l.* 13s. 8d.: leaving balance in hand, 1147*l.* 14s. 11d. It was then moved by Mr. NICHOLS, seconded by Mr. VIGURS, and carried unanimously, that the report and accounts be received and adopted.

Colonel CAMERON having inquired, if it was the intention of the company to complete the docks?—the CHAIRMAN said, that of course depended on the shareholders; and it was the determined intention of the directors not to take any measures without the full consent of the proprietary; while of the imperative necessity of their construction, at the earliest possible period, there was but one opinion.

Some conversation ensued, in which the chairman, Col. Cameron, and other gentlemen joined, on the merits and progress of the several lines in that part of Wales, as in connection with the docks; after which, a vote of thanks was passed to Mr. Francis (the secretary), for his zeal and attention to the best interests of the company, to which that gentleman replied—when, thanks having been voted to the chair, the meeting broke up.

UNION BANK OF AUSTRALIA.

The tenth annual general meeting of proprietors was held on Monday, the 17th inst., at the offices of the establishment, Old Broad-street.

ROBERT CARTER, Esq., in the chair.

The advertisement by which the meeting had been convened having been read by the SECRETARY (Mr. Samuel Jackson),

The CHAIRMAN said, it would now be his duty to submit to the proprietors the report of the directors. They had made that document so full that it would not be requisite for him to offer any observations on it, unless they should be elicited by any remarks that might fall from gentlemen present. He then read the report and statement of accounts, which were as follows:—

REPORT.

In presenting their 10th annual report, the directors feel that they may, without hesitation, congratulate the proprietors of the Union Bank of Australia upon the position which the bank has attained, both at home and in the colonies. The system of business which they have adopted, and which their inspector has very ably carried out, has been tried during the occurrence of many of those vicissitudes in the commercial world by which banking institutions are more or less affected, and it has stood the test—the capital has been reserved for the purpose of aiding the legitimate wants of trade, and the bank's advances restricted within such prudent limits as are calculated to guard against any very heavy losses. The events of every day have confirmed, in the minds of the directors, the importance of a steady adherence to these principles.

In their supplementary report, presented in January last, the directors briefly communicated the substance of Mr. M'Laren's very satisfactory report of inspection, made on his return from visiting the branches in Van Diemen's Land and New South Wales.

The accounts since received from the managers fully justify that report; and although the depressed state of the wool market in England, in addition to the high price of labour in Australia, must for a time press heavily upon the colonial settlers and the trade, yet the directors are glad to be able to state, from their recent advices, that the inspector and managers are prepared for the events that may arise, and are prudently adopting measures to protect the interests of the bank.

The steps taken by Government to promote emigration, will afford most timely and important relief to the colonies; and it is very gratifying to the directors to find that the value and necessity of a well-regulated system of emigration and colonisation is fully recognised by the Legislature at home, and felt by every one who understands the mutual interests and relative circumstances of the colonies and the mother country.

The improvement which has taken place in the internal condition and general circumstances of the New Zealand colonies, has induced the inspector to open a branch at Auckland, the seat of Government, to which Mr. Alex. Kennedy has been appointed manager. The branch had only commenced its operations at the date of the last advices.

Of the present position of the affairs of the bank generally, and the zeal and prudence manifested by our inspector, the local directors, and managers, the directors are gratified in expressing their entire satisfaction.

James Bush Smith and B. E. Lindo, Esqs., two of the present directors, retire by rotation, and offer themselves for re-election at this general meeting.

The directors now proceed to submit their annual statement of accounts, the general result of which enables them to declare a dividend, at the rate of 6 per cent. per annum, on the entire paid-up capital of the bank, to be payable in London on the 1st of August, and in the colonies as soon as the inspector shall fix after receipt of advices.

The dividend will be paid free of income-tax, and, in order to equalise the division, 7d. in the 1*l.* will be added upon such dividends as are paid in the colonies.

LIABILITIES.

Bills payable			£107,072	5 0
Sundry balances			4,358	5 7
Reserve fund (10 per cent.)	£56,384	16 1		
Profit and loss	45,863	13 2	102,248	9 3
Paid-up capital			820,000	0 0
Total			£1,033,678	19 10

ASSETS.

Branch accounts (balance)	£426,686	5	0
Bills receivable	123,652	6	10
Investments, Government stock, and loans on security	464,269	7	7
Insurances and open policies, &c.	9,027	14	2
Cash	10,043	6	3
Total	£1,033,678	19	10

STATEMENT OF PROFITS.

Balance of undivided profit at June, 1847			£ 37,677	10 11
To which are now to be added profits for the year ending at the branches 31st Dec., 1847, and at London office, 30th June, 1848, after deducting amount of bad debts to the above-mentioned date	£63,762	6 11		
Deduct 1-10th for reserve fund	6,376	4 8	57,386	2 3
			£95,063	13 2
Deduct dividend paid at Midsummer, 1847	£24,600	0 0		
Ditto ditto, at Christmas	24,600	0 0	49,200	0 0
Balance of undivided profit at this date			£ 45,863	13 2

RESERVE FUND.

At June, 1847, as per statement	£ 50,008	11	5
Add to June, 1848, as per contra	6,376	4	8
Total	£ 56,384	16	1

Mr. DE SALIS had been requested to move, that the report be adopted by the meeting, and that it be printed and circulated amongst the proprietors. It was with peculiar pleasure that he rose to make the motion, because it gave him an opportunity of addressing a few observations on the present position and future prospects of the company. He believed that he was peculiarly able to do this. He had for some years been a member of the Sydney board of directors, and he had recently visited, with the exception of New Zealand, all those parts of the colony where the bank had established branches. It was, therefore, with considerable satisfaction, founded, as he had said, upon his own personal knowledge, that he could assure this meeting that at all the places he had visited the branches were doing a steady and increasing business, and that they were daily receiving from the public fresh proofs of confidence. He believed that the success of the establishment was owing to the admirable management of the officers in the colony, and the wise and controlling influence of the gentlemen who composed the London board of direction. If the proprietors were to judge of the future by the past, they might confidently anticipate that the results would be equally as satisfactory as those exhibited by the present report. He believed he was not over-sanguine when he said, that the field of banking enterprise which the Australian colonies presented would be almost exclusively left to the Union Bank of Australia; and that if it were not, it would be occupied by those who could not be looked upon as their rivals or opponents. He did consider that, under the auspicious management of the gentlemen before him, they might look forward to a safe and most satisfactory progress of the business of the establishment. (Cheers.)

Mr. G. R. ROBINSON, M.P., inquired whether the income-tax had been previously paid for the proprietors who reside in the colonies?—The CHAIRMAN said, it had been done at the previous declaration of a dividend.

Mr. JAMES said, that the bank was not, perhaps, employing their half-million of money so well as the proprietors could wish; and, in saying this, he would take the liberty of observing, that he had heard from Adelaide there was an opening for a branch bank at that place. Had the directors any notion of opening a branch there? or, if there should not be a branch already established, was there not room for another? Before he sat down, he begged to ask the directors for a short general statement of the expenses of carrying on the branches in the colonies, and of the establishment at home.

The CHAIRMAN said, the question of opening a branch at Adelaide occupied the attention of the directors, as well as of the inspector, with whom they were in correspondence on the subject. The matter, however, was not yet in that state that would justify the directors in being more explicit. With respect to the expenses of carrying on the establishment, he had, in anticipation of the question, noted down the amount. The total cost of management in the colonies was 11,820*l* per annum, and the total cost of the management in London 3100*l.* per annum=14,920*l.* (Cheers.)

Mr. TODD said that, as a director of the South Australian Banking Company, he might mention there were two banks already established at Adelaide—one paying a bare 5 per cent., and the other not paying anything at all.

Mr. ROBERTSON inquired, what amount of bad debts had been written off since the last meeting?—The CHAIRMAN said, about 5000*l.* had been written off the bad debt account out of the profits of the last year; and the estimate of possible loss (which the directors believed was a very full estimate) that would fall as a charge against the undivided profits of 45,000*l.*, was 8440*l.* (Cheers.)

The report was then put and carried unanimously.

Mr. J. B. Smith and Mr. B. E. Lindo, the retiring directors, were then unanimously re-elected; and the dividend mentioned in the report having been formally declared, a vote of thanks was given to the directors for the zeal and ability with which they had conducted the affairs of the bank.

A vote of thanks to the chairman concluded the business of the day.

COMMERCIAL BANK OF LONDON.

The annual general meeting of proprietors was held on Tuesday, the 18th inst., at the establishment, Lothbury.

JOHN TAYLOR, Esq., in the chair.

The MANAGER (Mr. Cutbill) read the advertisement calling the meeting.

The CHAIRMAN: You have heard the advertisement read, informing you that this is our annual meeting, when the directors will make a report to the shareholders. Mr. Cutbill will now read it; after which I can take the opportunity of making one or two observations, when I shall be happy to give any explanation in my power.

Mr. CUTBILL then read the report and balance-sheet, which will be found in our advertising columns.

The CHAIRMAN: Gentlemen, I hope you will agree with the directors, that this report is, under the circumstances, very satisfactory. When you come to consider the monetary crisis with which this country was visited during the last autumn, and the severe pressure which, consequently, prevailed upon the whole commercial world, I think you must consider it a source of satisfaction, that this bank has been enabled to maintain its position. (Hear, hear.) You will notice, that comparing the net amount of profits, it is not quite so large as it was last year; but, although the net amount is not so large as at our last meeting, I am happy to say, that the gross amount is very nearly equal to that of the gross profits of last year—the difference having arisen chiefly from the allowance for bad and doubtful debts being greater than it was on that occasion. Still we are able to pay an annual dividend of 6 per cent., besides adding to the guarantee fund 2169*l.* 11s. 4d. (Hear, hear.) The pressure on the commercial world has not fallen on a few of us, but it has been general. It might be supposed, by looking at the debates in the House of Commons during the last month, that sugar was the only article that had experienced a great decline in its value; but it was not only the growers and importers of that important article that suffered, for the importers of cotton, wool, indigo, silk, and copper ore, had also suffered; in fact, every article, from the one of the largest consumption, down to the very smallest, has been depressed in value, and every one in business has been, more or less, suffering under these circumstances. Looking at these facts, you must admit that times were not very favourable to the extension of banking operations; and, therefore, we feel that we can congratulate ourselves, and can congratulate you also, that we have been able to maintain our position so favourably. (Hear, hear.) Now, this result is, in a great measure, to be attributed to the zeal, diligence, talents, and energy of our manager. (Hear, hear.) I should not have done justice to my own feelings, or to those of my brother directors, if I did not thus publicly state their unanimous opinion of the great value of his services in these times of difficulty. (Hear, hear.) I think we may now, however, console ourselves, that we are going to see brighter times than we have lately passed through; I think there is the prospect of a decided improvement; and as there is every appearance of a good harvest, we shall have money plentiful and cheap for all legitimate purposes. If there is no European war, and peace and order be preserved in this country, we indulge in the most sanguine expectations, that when we have the pleasure of meeting you next year, we shall be able to congratulate you, not only that the bank has maintained its position, but that it has progressed greatly in its business. (Hear, hear.) I am not aware of any other remark I am called upon to make; I shall be happy to give any explanation in my power. It now becomes my duty to declare to the proprietors a dividend at the rate of 6 per cent. per annum, clear of income-tax, payable on and after the 1st of August next. (Hear, hear.)

Mr. WINKWORTH said, after the digest, or epitome, of the state of the bank's affairs with which the chairman had favoured them, and the clear and distinct manner in which it had been done, it only remained for him to say, that he was one of those who heartily congratulated himself on its present condition, for which he felt grateful, not only to the directors, but to the other officers of the bank. It was, therefore, with great pleasure that he moved, that the report just read be approved, printed, and circulated amongst the proprietors. (Hear, hear.)—Mr. MORSE seconded the motion, which was agreed to unanimously.—The CHAIRMAN then moved, that the two directors who retired by rotation (namely: James Alexander Douglas and Edward Oxenford, Esqs.) be re-elected.—The resolution was passed unaminously.

Mr. OXENFORD (a director) returned thanks for himself and Mr. Douglas, who was absent. Since the first formation of the bank, he had devoted his humble but faithful services in the direction; and it was, therefore, very satisfactory for him to find how rapidly and prosperously the concern had advanced in public confidence, and the high position it now occupied amongst the banks of this great metropolis. (Hear, hear.) It was also a pleasure to have a seat at this board, from the friendly feeling which existed at all times amongst the directors, which had, no doubt, its good effects upon the bank. (Hear, hear.) He was also glad to see their respectable proprietors so regular in their attendance at the meetings; and the best proof of their confidence, was for the directors to find themselves so well supported by gentlemen of such weight and character.

Mr. CHOWNE moved, that Charles Hill, Esq., be elected a director. He was well known to most present, from serving the office of one of the sheriffs of the city of London; and from the way in which that gentleman had performed his duty, he was quite sure the proprietors would be glad to see him amongst the directors. (Hear, hear.)—Mr. UNDERWOOD (a director) seconded the motion, which was agreed to unanimously.

Mr. HILL returned thanks. He said it was quite delightful for him to witness the way in which his name had been raised. He would not make any promises at that early stage of their acquaintance; he only hoped their future acquaintance would prove satisfactory. (Hear, hear.)

Mr. THOMPSON (a director) moved that Thomas Winkworth, Esq., be elected a director. He was a gentleman now retired from business, and could give them the advantage of his time and experience, besides having a connection which would not fail to be serviceable to this bank. (Hear, hear.)—Mr. VENN seconded the motion, which was passed unanimously.

Mr. WINKWORTH returned thanks.

Mr. HILL moved a vote of thanks to the chairman and directors, for their able management of the affairs of the bank. (Hear, hear.)—Mr. VENN seconded the motion, which was agreed to unanimously.—Mr. BARNEWALL (a director) returned thanks, and said, that if any additional stimulus was wanting to their exertions, it would be the kind acknowledgment of them just manifested by the meeting. (Hear, hear.)

Mr. OXENFORD moved, that the thanks of the proprietors be given to Mr. Cutbill (the manager), for the zeal and ability which he had devoted to the affairs of the bank. (Hear, hear.)—Mr. HAMILTON seconded the motion, which was passed unanimously.

Mr. CUTBILL said, he was extremely obliged for the kind manner in which they had offered him this vote of thanks. If anything had been done by him that was satisfactory, it must be attributed to the kindness which he had at all times received from the directors. He trusted that his future exertions would continue to meet with their approbation, and to promote the interests of the proprietors. (Hear, hear.)—The meeting then adjourned.

LONDON AND WESTMINSTER BANK.

A half-yearly meeting of proprietors was held at the offices, on Wednesday last. From the report of the directors, it appeared that the net profits of the bank from the 1st of January to the 30th June last, was 24,838*l.* 16s. 11d., which, added to the rest or balance of undivided profit on the 31st December last, gave a sum of 125,486*l.* 13s. 10d.—the total of the profit and loss account, which, after deducting a dividend of 3 per cent. for the half year, being at the rate of 6 per cent. per annum, left a balance of 95,466*l.* 13s. 10d., to be carried to the next account, being a deficiency on the half-year of 5000*l.*, accounted for by the depreciation of property since December. The amount of bad debts incurred during the past six months was stated, in the course of a discussion which followed on the report being read, to have been 5000*l.*, and which, with the depreciation in the value of property held on the 31st of December last year, made a total loss of 14,000*l.* written off since the former statement of accounts was submitted to the proprietors. The loss originated not with the branch banks, but wholly with the parent establishment. The business of the bank, however, continued to increase, the report states; and the directors hope, that when commerce revives, the company will experience the benefits of its large capital and extended connections. On the whole, although this report does not present so satisfactory a course of business as those of contemporary establishments, it is not unfavourable, and finally was adopted with a vote of thanks to the directors. Some discussion occurred on several subjects connected with the report, or statement of accounts embodied in it; but the explanations of the chairman, Mr. DAVID SALOMONS, were satisfactory. The subjects referred to, were the deficiency in the profits of the company, the causes from whence they occurred, the profitableness of the branch establishments, the position of a late director, the advisableness of having half-yearly as well as yearly meetings, the value of warrants, the election of directors by the board instead of by the shareholders, and, lastly, on the general management of the company. The only matter included in these subjects of discussion which it may be necessary to remark upon here is that relating to the principle regulating the election of directors. According to the present system, adopted in accordance with the Deed of Settlement of the company, the board of directors have the power of selecting from amongst the body of shareholders such as it considers fit and proper persons to fill the office of director. The selection of the board requires to be confirmed by the shareholders, at a general meeting of the whole body, and unless so confirmed, such selection proves nugatory. Any shareholder can, however, be selected by the proprietors to fill the office of director, on giving six weeks' notice to that effect. It was contended by several proprietors present, that a principle which gave to the board the power to select its own members was exclusive and unconstitutional. The reply of Mr. Salomons, in defence of the principle, is worthy of more than casual observation; but, it should be first stated that all who spoke against the principle, did so chiefly on the ground that the directors chosen by the board held but a small interest in the company, compared with many of the shareholders, and that such persons were receiving a salary greater than their yearly interest in the company.—Mr. SALOMONS, in reply, observed in substance, that something more than mere wealth was essentially necessary in selecting a person to fill the office of director to a public company, more especially to a banking establishment; and not only was it necessary that the person selected should possess the requisite business qualifications, but also a compatibility of temper, in order that the members of the board should act with unanimity. The chairman also, in effect, observed that in many cases the choice of a director of public companies was guided by the amount of property held by a person, rather than by his acquaintance with the duties of office, and the necessary amount of ability. These remarks came out with more force, as one shareholder observed, that with respect to warrants, he considered them almost as so much waste paper, and would rather advance upon the personal respectability and credit of a person, than on such documents.—Mr. TITE, in reply, observed, that his friend took an erroneous view of the subject of banking; and that whatever the respectability and credit of a person might be, it was certainly safer, and more consistent with banking business, to accept a tangible security, which, whether it produced the amount estimated to be its value in the first instance, was nevertheless a *bonâ fide* security.—The open and candid manner in which Mr. Salomons answered the questions and explained the matters which the shareholders did not fully comprehend, gave much satisfaction, and produced a favourable feeling of confidence in the general administration of the affairs of the company.

CALEDONIAN RAILWAY COMPANY.

A special general meeting of shareholders in this company was held, on Thursday last, at Gibbs's Royal Hotel, Edinburgh, to take into consideration a resolution for the purpose of raising 745,180*l.* by the creation of shares, bearing a guaranteed dividend of 7 per cent.—to be divided equally among the shareholders of the company.

J. J. HOPE JOHNSTONE, Esq., in the chair.

The CHAIRMAN said—I have to express my great regret that it should be necessary for you to meet us here on this occasion for the performance of an act which you will feel, as I can assure you we feel, to be one of an unpalatable nature, and much to be regretted; but I trust to be able to show you that this necessity has arisen from circumstances entirely beyond our control. I may, perhaps, as the clearest mode of proceeding, enumerate the different Acts under the authority of which we have power to issue additional stock. There is, first, an Act authorising the purchase of the Garnkirk and Coatbridge Railway, by which we have power to raise 450,000*l.* on share capital, and on loans one-third of that amount. Secondly, there is an Act called the Garnkirk and Coatbridge Branch Act, obtained in 1846, by which we have power to raise 50,000*l.*, by the issue of shares, and by loans, 16,000*l.* Thirdly, by the Deviation Act of the Clydesdale Junction Railway, we are authorised to raise 16,000*l.*, by the issue of shares, and 5300*l.* on loan. Fourthly, by the Garnkirk Station Act, we are authorised to raise 150,000*l.*, by the issue of shares, and 50,000*l.* on loan. These sums, in all, amount to 666,000*l.*, inclusive of loans. No part of this has yet been raised, either on loan, or by the issue of shares. The amount authorised for the Granton branch, and for providing the station at Edinburgh, was 200,000*l.*; but as it was not the intention to proceed with the Granton branch, that amount was now limited to 79,180*l.*; these together made up the sum of 745,180*l.*, which we propose to raise by the creation of new shares. The chairman then proceeded to explain the advantages which would accrue from the outlay of this capital, particularly as related to the coal trade of Glasgow, of which the station was the depôt; there were at times at least 100,000 tons collected at one time at that station. He also explained to the meeting the extra works which had been executed, and also those yet to be completed, and which had been the cause of the increased expenses. He then moved a resolution, to the effect that the various sums authorised to be raised under the acts of the company, amounting in all to 745,180*l.*, should be raised by the creation of 74,518 shares, of 10*l.* each; and that there should be a guarantee on those of 7 per cent. for five years, and 6 per cent. in perpetuity, without participation in any surplus dividend, or any issue of new stock; that these shares should be paid at the following terms:—2*l.* 10s. on the 21st of August next; 2*l.* 10s. on the 21st of October; 2*l.* 10s. on the 21st of December; and 2*l.* 10s. on the 21st of February, 1849; and that these new shares should be divided rateably among the shareholders.

Mr. CAMPBELL, of Edinburgh, moved, as an amendment, that the chairman's statement and resolutions should be printed and circulated, and the meeting adjourned for a fortnight.—Mr. JACOBS, who represented the London shareholders, said, the statement had given great satisfaction; and he was persuaded the company's affairs were not in that gloomy state they had been represented.—The meeting then came to a vote, when 13 of those present voted for the amendment for adjournment, and 30 against it, together with proxies representing 2095 50*l.* shares, and 641 half shares, or 1170 votes. The motion was, therefore, carried by a large majority.—The meeting then separated.

THE JOINT-STOCK BANKS OF LONDON.

The following summary of the comparative position of the various banks has been made up from the returns furnished at the recent meetings:—

Banks.	Paid-up Capital	Deposits, &c. Preceding Half-Year.	Deposits, &c. This Half-Year.	Guarantee Fund.	Dividend this Half-Year.
	£	£	£	£	
London and Westminster, established 1834 (5 branches)	998,179	2,747,286	3,170,119	95,486	3 per cent.
London Joint-Stock, established 1836 (1 branch) ..	600,000	1,971,912	2,232,265	123,759*	3 per cent.
Union of London, established 1839 (2 branches)	422,900	2,510,064	2,644,728	50,000†	3 per cent.
London and County,‡ established 1839 (44 branches)—annual report presented in February	200,600	1,225,120	—	25,616	—
Commercial, established in 1840 (1 branch)	128,280	409,925	406,218	17,386	3 per cent.

* And 15,490*l.* unappropriated. † And 4309*l.* unappropriated.
‡ The meeting of the London and County Bank not having yet been held, the amount of deposit and dividend cannot be given.

MENTOR LIFE ASSURANCE COMPANY.

In no country in the world are the principles of life assurance so well understood as in England—in no other country are its advantages made available to a fraction of the extent they are here—where, within the past quarter of a century, the number of institutions have increased annually to a most extraordinary degree, and every one of which has proved itself a great public benefit, and a highly safe and profitable means of investment to the capitalist; yet, with all these means and facilities at command—with all the valuable examples set the people by the more prudent of their neighbours—there is even now probably not more than 1 in 100 heads of families who have availed themselves of the valuable privileges and advantages which such institutions confer. There is yet a wide field open for the dissemination of the principles of life assurance, for inducing that spirit of prudential foresight which those principles inculcate, and for reaping those solid advantages which the establishment of assurance companies, on a sound basis, are sure to afford. We have before us the prospectus of a company of this kind, just established, in Old Broad-street, under the title of the "Mentor Life Assurance Company," promoted and supported by parties of the first rank, wealth, and standing, both among the upper classes, and mercantile society. It has commenced with a subscribed capital of 250,000*l.* Its tables appear to be founded on the most liberal scale, consistent with safety; and, we have no doubt, it will be conducted in a sound and efficient manner, securing to its members that share of public patronage which well regulated public undertakings deserve.

MUTUAL LIFE ASSURANCE SOCIETY.—A friendly dinner of the members of this society took place at the Albion Tavern, Aldersgate-street, on Wednesday evening, in celebration of the progress of the society, and the removal of its offices to more suitable and capacious premises in King-street, Cheapside. The dinner being at the Albion, it would be superfluous to state that the viands, wines, and arrangements were of the first order. Mr. V. Knight occupied the chair; and Dr. Roe and Mr. Hardy, the vice-chair. The customary loyal toasts were drank with enthusiasm, and the remarks of the chairman in proposing them were responded to in the most marked manner. The whole proceedings of the evening tended to show that the progress of the society was considerable, and not less than merited; and the members, after having enjoyed a very pleasant evening, separated with an obvious determination to promote its progress and usefulness by every means in their power.

RAILWAY SPEED.—Mr. Stephenson showed to the House of Lords, on Thursday, that the express speed of the South-Western, between London and Southampton, was 1½ miles per hour faster than the Great Western, between London and Exeter.

The Metallurgical Treatment of Ores.

By JOHN MITCHELL, Esq., M.C.S., author of *A Manual of Practical Assaying, &c. &c.*

No. XXIV.—[*Continued from July* 8.]

TREATMENT OF THE ORES OF COBALT.—The products of the ores of cobalt which generally find their way into the market, are neither metallic cobalt nor alloys of cobalt, but merely the oxide, or some colouring matters prepared from it. The metal itself is only found in the laboratory of the chemist. It has a greyish-white colour, somewhat like platinum, and is capable of taking a very high polish. When fused in a crucible lined with charcoal, it absorbs a small quantity of carbon; it is then as soft as very soft cast iron. It is tolerably hard; but the file readily cuts it, and it possesses neither smell nor taste. Its specific gravity is 8·7; or, according to Berzelius, 8·513. It acts on the magnet, but in a less degree than iron. Metallic cobalt is generally found, associated with nickel, in meteoric stones; in fact nickel accompanies it in most of its ores. The following are the most common of its ores:—

Oxide of Cobalt is found on the surface of the arseniuret and sulphuret of cobalt; it appears to be accidental, and not a regular mineralised form of cobalt, being a product of oxidation. Its composition, according to M. Gossel, is oxide of cobalt, 19·4; oxide of copper, ·2; oxide of manganese, 16·0; silica, 24·8; alumina, 20·4; water, 17·0=97·8.

Sulphuret of Cobalt is a very rare species; it is met with only in the mines of Riddarhytta, in Sweden, and at Müsen. It is pale steel-grey, lustrous, and confusedly crystalline. Its fracture is uneven and granulated. In the closed tube, it does not decrepitate, or disengage sulphur; in the open tube, sulphurous acid is disengaged. The following are the results of two analyses—the first, that of Müsen, by M. Vornekinck; the second, that of Riddarhytta, by Hisinger:

Cobalt	53·35	43·20
Copper	·97	14·40
Iron	2·30	3·53
Sulphur	42·25	38·50
Gangue	—	·33
	98·87	99·96

Arseniurets of Cobalt.—There appear to be three native arseniurets of cobalt, containing respectively one, two, and three atoms of arsenic to one of cobalt. These ores generally have a pure grey, or greyish-white, colour, with a granular fracture. Before the blow-pipe, in the close tube, some give arsenic, others do not; in the open tube, they all disengage arsenious acid. The two following analyses are of the arsenical cobalt of Bieber, near Hanau, by Laugier:—

Cobalt	12·7	9·6
Iron	12·5	9·7
Arsenic	50·0	68·5
Sulphur	—	7·0
Gangue	25·0	5·2
	100·2	100·0

Analysis of Arsenical Cobalt, by M. John: Cobalt, 28·0; iron, 6·3; arsenic, 65·7=100·0.

Arsenical Cobalt, from Sauschwart, near Schneeberg, by M. Hoffmann: Cobalt, 13·9; nickel, 1·8; copper, 1·4; iron, 11·7; arsenic, 70·3; sulphur, ·7=99·8.

Arsenical Cobalt, from Riegilsdorf, by Stromeyer: Cobalt, 20·3; iron, 3·4; arsenic, 74·2; sulphur, ·9; gangue, ·2=99·0.

Arsenical Cobalt, from Piedmont: Cobalt, 9·6; nickel, 8·4; iron, 5·6; arsenic, 72·8; sulphur, ·8; gangue, 1·2=98·4.

Arsenical Cobalt, from Schneeberg: Cobalt, 5·0; nickel, 9·8; iron, 4·2; arsenic, 81·0=100·0.

Arsenio-Sulphuret of Cobalt—Grey Cobalt.—This species has much in common, in appearance, with arsenical cobalt. This ore is the richest in cobalt, and is the ore generally preferred in working, as it is much less troublesome. The following are some analyses—the first, second, and third are of the Tunaberg ore—the third, by Mitchell:—

Cobalt	39·0	32·6	37·41
Nickel	—	—	·97
Iron	2·0	6·2	2·85
Arsenic	34·7	40·0	38·20
Sulphur	21·7	19·6	20·32
	97·4	98·4	99·75

Grey Cobalt, from Skuterud, in Sweden, by Stromeyer: Cobalt, 33·1; iron, 3·2; arsenic, 43·4; sulphur, 20·1=99·8.

Grey Cobalt, from Hakambo, in Sweden: Cobalt, 18·5; copper, 0·7; iron, 16·3; arsenic, 45·0; sulphur, 19·1=99·6.

Grey Cobalt, from Cornwall: Cobalt, 21·3; iron, 15·2; arsenic, 43·8; sulphur, 19·7=100·0.

The oxide of cobalt, prepared from either of the ores just described, is employed in the manufacture of enamel colours; besides this product, there are others—as Thenard's blue, smalts, &c., &c. Besides these products, when the ores contain much nickel, that is obtained under the name of speiss, it is further treated so as to obtain its metal, to be used in the manufacture of German silver. As before stated, in works where the ores of cobalt are treated, it is not the intention to procure a pure metal, but to obtain an oxide, which is mixed, in suitable proportions, with vitrifiable matter, such as potash and silica, and fused, so that a fine blue-coloured glass may be obtained; this is generally the substance which finds its way into commerce. Sometimes, besides smalts, a product termed *zaffre* is made; this, by an ulterior fusion with glass, imparts to it a fine blue colour.

Preparation of Oxide of Cobalt.—Berthier gives the following directions for the preparation of oxide of cobalt:—Dissolve the finely-powdered crude ore in aqua regia (a mixture of nitric and hydrochloric acids); evaporate to dryness, to drive off excess of acid, and add water. The whole of the cobalt will be dissolved, and the insoluble portion consists of arseniate of iron and gangue. A solution of carbonate of potash, or soda, is then added in small quantities, until the precipitate which forms on each addition appears reddish, or rather rose coloured. All the iron is then separated, and the liquid is to be rendered bright, either by filtration or decantation. An excess of alkaline carbonate is then added, and the precipitate thrown down is washed and dried. Its nature varies considerably; it generally contains a considerable quantity of arsenic acid, more especially if the ore were very free from iron; but if it were very ferruginous, the product would be tolerably free from arsenic acid. As may be readily perceived, the oxide thus obtained is far from pure; if it be required absolutely pure, several methods may be adopted. The best, and most simple, consists in roasting pure arseniuret of cobalt, adding, from time to time, small quantities of powdered charcoal, in order to expel the largest possible quantity of arsenic; then to dissolve the roasted matter in nitric acid, adding about 10 per cent. of iron filings, evaporating the solution to dryness, at a moderate heat, and dissolving as much as possible with water; the insoluble matter remaining is arseniate of iron; but the liquid yet contains some of that substance, which can be removed by the careful addition of a solution of carbonate of ammonia, until the precipitate which falls assumes a rose colour; it is then filtered, in case the solution be suspected to contain sulphuric acid; a few drops of nitrate of lead solution may be added, and then a stream of sulphuretted-hydrogen gas passed in, until the whole of the lead is precipitated; the solution is again filtered, and the bright liquid evaporated to dryness, and the dry residue carefully ignited at a white heat; the product is pure oxide of cobalt. In case, however, the arseniuret contained nickel, the oxide so produced would be contaminated with oxide of that metal, and then another process must be had recourse to. The following is that proposed by Liebig:—The ore is carefully roasted, and one part is gradually introduced into an iron vessel, containing three parts of bisulphate of potash (sal-enixon), in a state of fusion. The mixture is at first tolerably fluid, but gradually thickens; when in this state, the heat must be increased to redness, until the whole again enters into perfect fusion, and gives off no more white vapours. The fused matter is then poured out and pulverised, treated with water, and filtered. The solution now contains neutral sulphates of potash and cobalt, and neither arsenic, iron, nor nickel—for sulphate of cobalt withstands a red heat, whilst the sulphates of iron and nickel are decomposed under similar circumstances. In order that the operation may fully succeed, the heat must be kept up so long that all excess of sulphuric acid be expelled, in which case the liquid filtered off will be neutral. The cobalt contained in the solution is separated as before by either carbonate of potash or soda. The insoluble residue contains arseniate of cobalt, and must be again treated in the same manner. This second treatment can be avoided by adding to the mixture of cobalt ore, and bisulphate of potash, a quantity of sulphate of iron, calcined to redness, mixed with one-tenth of its weight of nitre. In this case, the whole of the arsenic combines with the peroxide of iron, and the residue contains but a trace of oxide of cobalt.

Preparation of Pure Sulphuret of Cobalt.—To prepare sulphuret of cobalt, one part of the well-pulverised ore is fused in a crucible, with a mixture of half a part of dry carbonate of soda, and half a part of sulphur. At a white heat the mixture becomes as liquid as water; it is then poured out. When cold it is dull and grey, and contains disseminated sulphuret of cobalt, in the form of shining bronze-coloured scales. It is pulverised, mixed with a large quantity of water, and washed by decantation. The liquid passing off has a deep green colour, and contains in solution, sulphuret of arsenic, a little sulphuret of iron, and a trace of cobalt, which is so small, as to be worthless. The residue has the appearance of a black metallic mud, mixed with metallic scales; it is composed principally of sulphuret of cobalt yet retaining arsenic, and sulphuret of iron. This matter, treated with hydrochloric air, is freed from the sulphuret of iron, which is soluble in that agent—the scales, however, are not attacked by it. After having washed and dried them, they are again treated with carbonate of soda and sulphur, and thus the whole of the arsenic is generally separated; if not, a third treatment must be had recourse to. The pure sulphuret thus obtained is very useful in preparing pure oxide, as is also the pure arseniuret, to be described below.

Preparation of Pure Arseniuret of Cobalt.—If cobalt ore be fused with half a part of carbonate of soda, nearly the whole of the sulphur can be readily separated. The best method is to employ a crucible, lined with charcoal, and to heat very strongly. The most impure ore—that of Hakambo, for instance—treated in this manner, with half a part of carbonate of soda, gave 40 per cent. of arseniuret of cobalt, containing but a very small quantity of iron and sulphur, and a compact crystalline slag, composed of sulphuret of iron and sulphuret of sodium, and containing but traces of cobalt. Instead of using a charcoal crucible, from 10 to 12 per cent. of charcoal may be mixed with the carbonate of soda and ore.

[In the next week's Journal the treatment of cobalt ores will be resumed.]

HUTCHISON'S INDURATED STONE.

We have much pleasure in observing, that this valuable material is quietly, but surely, forcing its way in public estimation. The principal materials at present operated upon are the beautiful freestone at Caen, in Normandy, and a worthless sandstone, which crumbles between the fingers, at Calverley Quarry, Tonbridge, Kent, but which, as we have before stated in our notices on the subject, is rendered as hard and durable as granite. The patentee, to whose long persevering efforts must be ascribed the perfection to which the processes are brought, still in the most handsome manner publicly declines the merit due to the original invention. It was first discovered by a M. Charles Le Goux, of Bayeux, Normandy, and of whom Mr. Hutchison purchased the *brevêt d'invention* which had been taken out for France, and has since taken out patents for this and other countries. We think the merits of the substances produced are now pretty generally becoming known to the public; and as time continues to give additional proofs of its economy, and the perfect indestructibility of the materials—and as, probably, still further improvements may be made in colouring, during the indurating process, rendering it more applicable than at present to the finer works of art—it is likely to become one of the most valuable discoveries of this extraordinarily inventive age. As we have so often fully described the processes, and their effects, it would be superfluous for us, on this occasion, to repeat them; to show, however, that our favourable opinions are fully borne out by others, we give the following from the *Sussex Express*:—"Having heard much of Mr. Hutchison's method of indurating stone, we were induced to visit his works at Jack Wood's Spring, on Thursday last. We had been prepared to expect to find that the stone, which had been subject to the process of induration, had been completely metamorphosed; but we must confess we were not prepared to see the soft stone at Jack Wood's, which, in its natural state, crumbles to powder with the slightest pressure between the thumb and finger, rendered as hard as granite or marble. Several pieces that were shown us were close imitations of various kinds of the most beautifully grained and black marble; and, as by this process it is rendered absolutely imperishable from atmospheric action, and capable of receiving the highest polish, we can, without the slightest hesitation, accord to Mr. Hutchison the merit of making one of the most extraordinary discoveries of the present age. The purposes to which this patent can be applied are innumerable. The softest stone, chalk, wood, paper, &c., can be rendered as hard as metal, so that the most useless rubbish can be turned to the most valuable purposes, and, to crown all, the cost much lower than any other that has hitherto been introduced for purposes to which it can be applied. Of course, in the space of a newspaper paragraph, it would be impossible to enumerate a tithe of the benefits this discovery is likely to confer on society; but, from the information we gathered while inspecting the works, we consider it highly deserving the attention of engineers, architects, sculptors, builders, and even to surveyors of highways. By an advertisement, which appears in another part of this journal, we perceive that Mr. Hutchison is open to grant licenses to indurate for districts, or entire counties."

ON THE CONVERSION OF DIAMOND INTO COKE.

In the course of last year M. Jacquelain succeeded in converting diamond into a substance possessing the appearance, physical character, and electrical properties of coke by the following process:—Having attached a piece of hard gas retort carbon to the positive wire of Bunsen's battery of 100 elements, he placed on it a small piece of diamond. He then armed the negative wire with a cone of the same carbon, and, by dexterous manipulation, enveloped the diamond with electric flame. After a short interval, the diamond underwent a sort of ebullition, became disintegrated, softened, and was actually coke. (*Comptes Rendus*, June 14, 1847; *An. de Chimie*, tom. xx., p. 459.) On this experiment Prof. Faraday made the following observations, in a paper on the subject at the Royal Society:—

1. *As to the property possessed by certain substances to assume totally different forms without undergoing any chemical change.*—Prof. Faraday adverted to the case of sulphur, which becomes brittle when suddenly cooled from its first state of fusion, but is soft and pliable when similarly cooled from its second state of fusion.

2. *As to the source of heat employed.*—Prof. Faraday dwelt on the beauty and power of the voltaic arc as a furnace. Showing by experiment that diamond could be burned into carbonic acid gas by means of a current of oxygen gas directed on it when highly heated, the professor stated that neither this heat nor any short of that of the voltaic battery, except that of the solar lens, was sufficient to convert diamond into coke. The fusion of rock crystal by a current of oxygen sent through an ether flame was noticed; and it was shown that this powerful heat was inferior in intensity to that of the battery.

3. *The condition of the diamond when thus converted into coke.*—It becomes absolutely lighter. The specific gravity of ordinary diamond is 3·368; when changed into coke its specific gravity is 2·679. It loses its insulating power. Prof. Faraday here alluded to some experiments by M. Karsten (*Archives des Sciences*, 1847), proving that certain compound bodies were conductors or not according to their preparation. He stated that this was the only case analogous to carbon.

4. *As to the philosophy of the change of the diamond's structure.*—Referring to M. Gassiot's demonstration that the heat is greatest at the positive pole of the battery, Prof. Faraday suggested the possibility that the particles of diamond might, under the influence of the intense heat, tend to form vapour having a sensible and assisting expansive force, and that in their axial position as regarded the enveloping discharge they might assume a state having relation to a dia-magnetic condition. He requested to be understood, however, as offering this idea merely as a philosophical conjecture. Finally, he referred to Graham's supposition, that the difference between diamond and coke might depend on their known difference of specific heat.

NORTH WALES SLATE COMPANY.—The large and increasing demand for slate of all kinds, for every description of architectural, commercial, domestic, and agricultural employment, renders any undertaking for the working of slate quarries of considerable interest. A company, under the above title, has just been formed, under very promising auspices, for working the Gaewern and Idris Quarries, situate in the neighbourhood of Minfordd, in the county of Merioneth. The former is held on a lease, of which 39 years are unexpired, at a yearly rental of 110*l.*, and occupies a surface of about 100 acres. The prospectus states, that the present openings and machinery are capable of producing 120 tons of slates, and 120 tons of slabs per month; and that, with a small outlay, those quantities may be doubled. The Idris Quarry is held direct from the Crown, at a yearly rental of 1*l.*, and the usual royalty for a term, of which nearly 21 years are unexpired, extending over a surface of 220 acres, with a plentiful supply of water from Lake Arren, for purposes of power. Both these quarries are of a highly promising character; the Gaewern has been in operation several years, and large sums have been expended, placing it in a highly advantageous position; and it is believed they can compete with the most favoured in Wales, having only seven miles of land carriage to the shipping place. The present proprietors consent to accept, as consideration, by far the greater portion in shares, which are to be 50,000, at 1*l.* each, forming a capital amply sufficient for efficiently working the concern, after the construction of the necessary new works. The present proprietors have agreed to forego any interest, until a dividend of 15 per cent. has been paid on the shares held

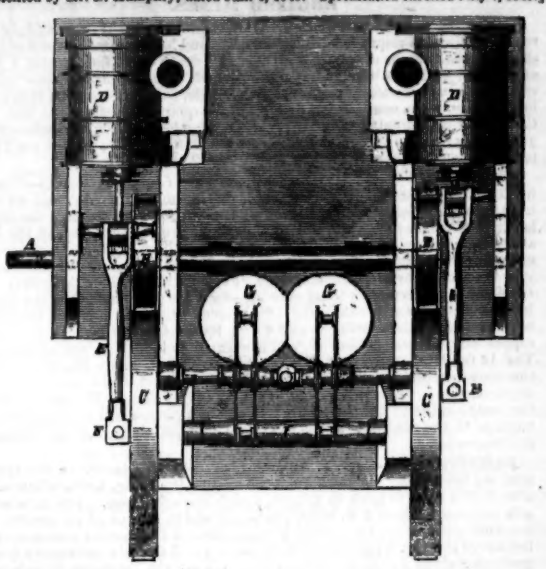
We have great pleasure in stating, that Sir J. Guest has given orders that the Dowlais Mill should be put in operation, and that the furnaces which have remained out of blast for a long time, be put in without delay.—*Swansea Her.*

NITSHILL COLLIERY, LANARKSHIRE.—The seam of coal found here belongs to the Clydesdale basin, which our readers will be aware is one of the three great coal measures of Scotland. It crops out at the surface of the earth, at a distance of about a mile to the north-west of the Nitshill workings, and extends in a north-easterly direction towards Campsie, at which place it is seen and wrought—the same seam is also found in different parts of the country. An unbroken expanse of coal thus traced, widely traversing the face of the country, and available at different positions, constitutes one of those territorial gifts which warrant the assumption that the industrial prosperity of Scotland is destined to endure for a long series of years. The single field appertaining to the mine to which we now allude, is of itself capable of an enormous yield. It extends over 300 acres of ground; and passages having been driven in all directions, nearly to the boundary line, it is considered morally certain that the whole expanse consists of one unbroken sheet of coal. The average depth of the seam being 6 feet, some idea may be formed of the gross bulk contained in the space of 300 acres. With the two shafts in full operation, no fewer than 400 to 500 tons of coal may be drawn every day out of this mine. But here the question naturally occurs, how long can this process last? The proprietors estimate that they have already excavated to the extent of 10 solid acres, and with this fact before us we will take the liberty of calculating the prospective resources of the mine. A square yard of the coal weighs, we are informed, 20 cwts.; and the seam being 6 feet in average height, it follows that the 10 acres already excavated contained 121,686 square yards, or just so many tons of coal. The same method of computation shows that the remaining 290 acres comprise the enormous quantity of 3,828,953 tons—a quantity which ensures a yield of 200 tons per day, unintermittingly during the period of 57 years.—*Scottish Railway Gazette.*

IMPROVEMENTS IN STEAM-ENGINES.

AND IN ENGINES OR APPARATUS FOR RAISING, EXHAUSTING, AND FORCING FLUIDS.

[Patented by Mr. E. Humphry, dated Jan. 4, 1848. Specification enrolled July 4, 1848.]



The sort of steam-engine to which Mr. Humphry's improvements have more particular relation, is that now usually employed in screw-propelling, which is of the class called direct-acting, but works, at the same time, through the medium of multiplying wheels; and though these improvements consist but of matters of arrangement, they will be found of very great value and importance. By a better disposition of the ordinary parts of the engine, he is enabled to dispense entirely with one prominent member (the crank), and to bring the whole within a much smaller compass than has ever before been done. A pair of engines on this plan have been already fitted to the Government screw-steamer *Reynard*, with which some most successful trials were made down the river last week; and there seems little doubt of the same plan being henceforth generally adopted.

The prefixed figure represents a top plan of a pair of screw-propelling engines on this plan. A is the screw-shaft; B B, pinions attached to the screw-shaft; C C, driving-wheels, which gear into the pinions B B; D D, the cylinders, the pistons of which are connected by rods, E E, to pins, F F, on the outside of the driving-wheels; and G G, the air-pumps, which are worked by cranks or eccentrics on the shaft, I. In this improved arrangement, the driving-wheels occupy the positions usually assigned to the engine-cranks; that is to say, each wheel revolves in a space between a straight line drawn through the centre of the piston-rod of the adjoining cylinder, and a parallel line drawn through the adjoining bearing of the main shaft; and the so placing of the driving-wheels enables the pistons to be connected directly to them, instead of through the intervention of cranks, as usual.

Mr. Humphry's patent includes also an improved description of valve for engines and apparatus used in raising, exhausting, and forcing fluids, such as steam-engine air-pumps, atmospheric railway pumps, &c. A metal plate (of a square, or any other suitable form) has apertures made in it for the inflow or outlet of the fluid. Each aperture is covered by a piece of steel, or other like flexible metal, of about one-sixteenth of an inch in thickness, which is made fast at one end by screws, while the other end is let free—so that, while it yields with the greatest readiness to the pressure of the fluid, it closes instantly again on the cessation of the pressure, without noise or any liability to derangement.

CUTLER'S PATENT LAP-WELDED IRON TUBES.

[Patentee, Job Cutler, Birmingham, C.E. Patent dated Jan. 13, 1848, for certain improvements in welded iron pipes or tubes to be used as the flues of steam-boilers. Specification enrolled July 13, 1848.]

The patentee states that the object of his invention is to produce lap-welded iron tubes or pipes, so formed as to give increased strength to those parts which are exposed to wear, without additional weight to the entire length of the tube, and thereby to obviate the evils to which boiler tubes are at present exposed. He proposes to effect this by making the internal diameter of the tube greater at one end than at the other, instead of its being the same, or uniform throughout, as has hitherto been the case; the external diameter remaining, however, the same, and uniform throughout the entire length of the tube. The tube will, of course, be cylindrical upon the exterior, and conical upon the interior surface. The increased thickness of metal at the one end is to be drawn from the remaining portion of the entire length of the tube. And further, the operation is effected at one heat, so that the ductility of the iron of which the tubes are composed shall remain unimpaired.

The *modus operandi* is as follows:—The patentee employs a series of grooved rolls, moved by suitable toothed wheels and a mandril, with a conical bulb or head, the stem of which is of increasing diameter towards the opposite end. The skelp, after being properly prepared, as is usual in the manufacture of lap-welded iron tubes, is heated and passed between the first of the series of rolls. It is then welded over the conical bulb, and forced, at the same time, over the stem of the mandril. This mandril is held by a grip, attached by a hinge thereto in a stop, so as to allow of its being lowered and passed, after the conical bulb has been removed, between the second series of rolls; the diameter of the groove of which is smaller than that of the first series. The tube, with the mandril still inside, is then passed through the third series of rolls; the groove of which is smaller than that of the second series. The object of these successive rollings, after the skelp has been welded on the mandril, is to remove any irregularities upon either of the surfaces, and to make the edges of the tube perfectly smooth and uniform. The tube is then taken to the drawing bench, in front of which is a stop, and against which the pipe rests. The stop is furnished with a hole to allow of the passage of the grip of the mandril, which is held tight by a pair of pliers; and, the bench being made to move while the pipe remains stationary, the mandril is withdrawn. When it happens that the mandril adheres too tightly to the tube, it is proposed to heat it in a muffle or furnace, then to cool the end which rests against the stop, and repeat the above operation, or to roll it cold between three rollers, as is usually done in straightening shafting.—*Mechanics' Magazine.*

DOVER REFUGE HARBOUR.—This great national work is now progressing with much spirit, and begins to show symptoms of what it will be. The first portion, as our readers are aware, 800 feet of a massive sea-wall, has been contracted for by the Messrs. Lee, of London; and the works are carried on under the superintendence of their active agent, Mr. Scott, whose previous experience and practice in similar works fit him, in a peculiar manner, to conduct this extensive undertaking. The plan is, we believe, that of Mr. Walker, the eminent engineer; and the execution of the engineering department also devolves on him and his partner, Mr. Burgess. The works now extend 130 feet into the sea, and the curve to the eastward has been commenced. One diving bell was put into requisition on Monday last, in the process of levelling the rocks for the foundation, and another will be brought into use next week. Of the immense quantity of stone (8500 tons) which has been landed here within a few months, nearly one-half has already been put down. The blocks are uniformly of large dimensions, some exceeding 10 tons in weight.—*Kentish Observer.*

LONDON AND NORTH-WESTERN RAILWAY.—The directors of this company, encouraged doubtless by the easy state and cheap conditions of money, is about to make a somewhat onerous addition to its already cumbrous liabilities. An agreement is understood to be actually concluded and signed between it and the Aberdeen Railway Company, by which the former covenants to take shares at par, in the latter, to the extent of 140,000*l.*, and undertakes to enable it to pay off debentures at short dates and high rates, which shortly become due. What the exact conditions are per contra in favour of the London and North-Western Company have not yet precisely transpired, but must shortly be rendered public in course. In taking shares at par, or say at the 50*l.* paid, when they can be bought in the market at about 22*l.*, or say 28*l.* discount, countervailing advantages in some shape or other of a prospective nature must necessarily be stipulated or contemplated.

NATURAL PHENOMENON.—Great excitement has of late prevailed at Liegnitz, caused by another mysterious locomotion of the Wanderstein, or migrating stone of the Riesengebirge. This stone has repeatedly been known to have changed its place, without the action of any outward agency whatever. It stands in the Agnetendell, near the village of that name, and consists of fine grained granite of a yellowish gray, composed of white quartz, red felspar, with a slight admixture of black glimmer. This block of granite has suddenly moved above 25 yards from its former place. The last locomotion dates from the year 1822, and its migrations are the more enigmatical as they take place, not on a slope, but on perfect level ground. It is impossible to conceive the cause which thus repeatedly forces this rock from its place of rest, and constrains it to such violent leaps as that in 1822 and of this year, which took place between the 18th and 20th ult.—*Breslauer Zeitung.*

Mining Correspondence.

ENGLISH MINES.

ANTIMONY AND SILVER-LEAD.—Capt. Charles Williams (July 20) reports—We have suspended driving our adits, and have commenced our engine-shaft, for the purpose of taking our lodes at a depth of 20 fms., which I fully expect will be driven by a whim, and by which time our engine-house will be erected. I have carefully examined No. 1 lode, as placed on the map; this lode is 20 in. wide, composed of brown gossan, quartz, felspar, white iron, and thoroughly impregnated with silver-lead ores; the said lode is discharging a great deal of water, and underlaying east 1 ft. 6 in. in a fm.; I have put 2 men to explore on this lode at 40s. per fm.

ASHBURTON UNITED.—Capt. J. Kernick (July 15) reports—The 25 fm. level, at Hobson's, is in more favourable ground for driving, and we have intersected in it some small branches of copper, inclining towards the copper lode. The tributers having drawn the water out of the winze in the level above (the bottom of the 14 fm. level), I have been enabled to obtain the underlie of this copper lode, and I find it will take 10 ft. more to drive to cut it in the 25 fm. level cross-cut, should the underlie continue the same; this cross-cut is important as to its position—for I am of opinion that the copper lode has not been seen below the 14 fm. level, and that the rich copper ore which is being raised in the 35 and 45 fm. levels is from the tin lode, for the copper lode overlies the tin lode, and is in entire ground to the east of Hobson's. The 14 fm. level, south-east of Hobson's, driving towards Brother's lode, is the same as when last reported. In the western part of the mine there is an improvement in Meynaid's pitch, in the 14 fm. level, near Murray's shaft, on the south tin lode. On the whole, I expect the pitches will set to greater advantage to the company at the next two months' setting, as our prospects are improving.

BARRISTOWN.—Capt. T. Angove (July 14) reports—Since my last report, we have holed the winze from the adit to the 16 fm. level, which leaves a back of 9 fms., to work on tribute, under the adit level. The lode in the adit end east is about 3 ft. wide, producing about 6 cwts. of ore per fm., in a beautiful gossan; we are sinking a winze about 2 fms. behind this end, in the bottom of the adit level; the lode in it is also 3 ft. wide, principally gossan, producing about 6 cwts. of lead per fm. We are also preparing to sink under the 16 fm. level, at eastern flat-rod shaft.

BEDFORD UNITED.—Capt. James Phillips (July 19) reports—At Wheal Marquis, the ground in the engine-shaft is favourable for sinking. In the 90 fm. level east, we are still driving by the side of the lode. The lode in the 90 fm. level west is unproductive; and, in the stopes, in the back of this level east, the lode is still worth from 60*l.* to 70*l.* per fm. In the 80 fm. level east, the lode is 18 in. wide, producing stones of ore. We hope to hole to Hodges's rise, by sinking in this level, in a few days. The lode in Evans's winze, in the 70 fm. level, is 18 in. wide, producing good saving work.

COMBLAWN.—Capt. J. Hosking (July 14) reports—We have this day intersected the cross-course in the 15 fm. level; it is 1 ft. wide, strongly impregnated with lead and iron pyrites, with a beautiful soft spar and prian; the lode is large, and of the same genial character as when last reported; but from its being only 15 fms. below the surface, and although so promising, yet we think it advisable to suspend further operations in this level, until the mine is drained sufficiently to enable us to drive the cross-cut south in the 20 fm. level. In driving east on the lode in the 20, the cross-course will be met with in driving 2½ fathoms from engine-shaft; then we can easily and speedily develope the south lode, by driving south on the cross-course.——*July* 18.—We have cut through the cross-course; it is full 2 ft. wide, carrying a flookan on the eastern side, or footwall, 4 in. wide, with good stones of ore in it, and of such a promising character as fully convinces me that a rich lode in a deeper level will be the result. It has always been the opinion of a first-rate mine agent in this locality, that the cross-course which we have recently intersected in the 15 fm. level, is the Callington Mine lead lode; and, from its bearing and general character, I am inclined to think the same: we shall endeavour, if possible, this month to see the lode east of the cross-course, and, when we have done so, I will advise you as to the prospects, &c.

COOMBE VALLEY SLATE QUARRY.—The purser, Mr. C. S. Richardson, reports—Our works here are looking exceedingly favourable: the slate is very good, and, in quantity, we can raise whatever we want. The Hand Quarry is in full operation; but the Allshard Quarry requires opening to a greater extent; all our machinery is complete, and now we are in a way to make profitable returns; we have proposed to set tribute pitches, having, in all, five good quarries; offers have been made by contractors to ensure the company a profit of 35 per cent., without any risk, or further expenditure of capital; but none has yet been accepted. The first vessel, the *Yeoman's Glory*, cleared out of the harbour on Friday, the 15th inst., with a cargo of 54 tons of mixed slate, for London. She is expected to arrive in the Thames at the end of this week. Orders, to any amount, may now be received; and I am happy to say, at present, we are in no way deficient of them.

CWM ERFIN.—Capt. S. Nicholls (July 15) reports—We have not yet got the lode in the engine-shaft—the ground pretty much the same as last reported. The 20 fm. level, west of whim-shaft, has been commenced driving on the last two or three days. The 10 fm. level, east of the eastern shaft, is still poor; but I am in hopes it will make ore again soon. The stope, east of the whim-shaft, is worth 8 cwts. of ore per fm. The stope, 20 fms. east of the whim-shaft, is worth 6 cwts. of ore per fm. The stope, west of the eastern shaft, is poor at present, worth from 2 to 3 cwts. of ore per fm.

DRAKE WALLS.—Capt. R. Williams (July 17) reports—Brenton's stopes, below the 50, are poor at present, being disordered by a large sparry cross-course; the 50 east of Brenton's has good branches of tin; this end is about 8 fms. east of the above stopes. In the stopes below the 40, east of Brenton's, is good saving work. In machine shaft, below the 50, the branches are tinny, but not rich; in the stopes, east of machine shaft, below the 40, is saving work; in the end and stopes, east of machine shaft, in the 33, are good branches; we have cut through the north lode, and find it small and poor; we have suspended it until further orders. I fear our next sampling will fall short of the usual quantity, in consequence of the dry weather, not having sufficient water to draw and dress the ores.

EAST CROWNDALE.—Capt. S. Paull (July 15) reports—The lode in the 58 fm. level west is 2½ ft. wide, composed of capel, spar, mundic, and spots of ore; the appearance of this level east is much improved; the lode is 4 ft. wide, composed of capel, spar, prian, mundic, and good stones of ore. The ground in the cross-cut north continues to be hard and spare to drive, which makes our progress slow. I hope to report the north lode being cut in a short space of time. The rise in the back of the adit level, on the course of the south lode, is holed to the old men's shaft; the lode in this place contains some good saving work, and, without doubt, the whole of the ground in the back of the adit level will pay for stoping to the surface, or the old men's works. The lode in the adit level, driving west, is still very good—in fact, there is not any material alteration since we first cut the tin; the lode averaging 6 ft. wide, composed of capel, peach, spar, mundic, prian, and tin, worth from 30*l.* to 40*l.* per fm. Our engine and stamps will be set to work on Wednesday.

EXMOOR WHEAL ELIZA.—Captains W. H. Whitford and Thos. Dunn (July 20) report—To justify our conduct for not having reported on this mine during the last fortnight, we beg to refer you to the effects of the abundant rain which recently fell on the adjacent hills, which, in its resistless violence, broke down the main leats, and filled the mine with water; when we found that our working-lift was incapable of forking, we proposed to drop the 8-in. lift, which is being done. After all the objections started by our opponents, that it was absolutely impossible to work them without an additional set of horizontal rods, we find that they work considerably better than when single. We have a week more, according to our first calculation, to cut the great north lode, and there are very presumptive evidences that it will be accomplished within that period. Since the water has been in, the sumpmen have been cutting ground for a balance-bob, making whim round, and other necesssary work. We hope to be in a position to report more favourably next week.

GREAT MICHELL CONSOLS.—Capt. T. Richards (July 19) reports—The lode in the 45 fm. level, east of the sump winze, contains mundic, capel, fluor-spar, and ore; in this level west the lode continues without important alteration, containing mundic, capel, and spar, producing in places rich stones of ore. In the 35 fm. level, east of the sump winze, the lode consists of mundic, capel, and spar, with a small proportion of ore. We have removed two men from this level to the 35, east of the engine-shaft, to drive in under the pitch and prove this eastern ground, which has already turned out some good parcels of ore.

HOLMBUSH.—Capt. W. Lean (July 18) reports—The shaftmen are making rapid progress in cutting the plat in the 132 fm. level, and we expect it will be completed this month; the lode in the 132 fm. level west is, from wall to wall, 8 feet wide, composed of spar, mundic, spots of copper, and killas. The lode in the 120 fm. level south is 3½ ft. wide, composed of soft spar, prian, and lead, worth 5*l.* per fm.; the lode in the stopes, in the back of this level, is 4 ft. wide, producing stones of lead, with favourable ground for exploring. The lode in the 110 fm. south is 3 ft. wide, composed of quartz and lead, worth 4*l.* per fm.; the lode in the stopes, in the back of this level, is from 3 to 4 ft. wide, producing saving work. The lode in the 100 fm. level south is 2 ft. wide, composed of spar and stones of lead, scattered throughout the lode—the best part of which is selected, and the remainder carried to the stamps; the Flapjack lode, in the same level, is 2 ft. wide, making one good wall, and is composed of mundic, spar, blende, prian, and spots of copper ore, in the midst of soft white killas strata—favourable for driving through. The lode in the 90 fm. level south is 20 in. wide, composed of spar, flookan, and stones of lead. Dr. Somers being the purchaser of the parcel of silver-lead ore, computed 80 tons, no time shall be lost in obtaining a vessel to ship it off.

KIRKCUDBRIGHTSHIRE.—The agents (July 15) report—In the 50 end, on the main lode west of Stewart's shaft, the lode is large and kindly, with stones of lead through it; in the same end, on the north lode west, there is a fine lode, about 2½ ft. wide, worth half a ton of lead per fm.; these lodes are coming together going west. In the 40 end, west of Keith's, the lode is 4 ft. wide—very fine ground, worth 1 ton to the fm. In the 30 end west the lode is large, with spots of ore scattered through it; the same end, east of Stewart's, has greatly improved this week—there being a good branch of lead come in on the foot wall, and the lode, which is about 2½ ft. wide, is much softer for breaking than before.

LEWIS.—Capt. S. S. Noell (July 15) reports—The ground in the 70, south-west from sump-whim shaft, is hard; the lode in the 70, west of sump-shaft, on south branch, is 4 in. wide, worth 4*l.* 10s. per fm.; the lode in the 70 east is 2½ feet wide, producing some tin, and very promising. The lode in the 60 east is 2½ ft. wide, saving work for tin; the lode in the 60 east, on south branch, is producing some good stones of tin—ground more favourable than when last reported; the lode in the 60 west, on south branch, is 4 ft. wide, worth 48*l.* per fm.; the stopes, in the back of this level, are producing excellent quality tinstuff. The lode in the 50 west, on south branch, is 8 in. wide, worth 5*l.* per fm. The lode in the 40 east, on south branch, is 8 in. wide, worth 3*l.* per fm.; the stopes, in the back of this level, are very much improved since my last. The south lode, in the 20 east, is 1 ft. wide, worth 8*l.* per fm. The south lode, in the 10 east, is 1 ft. wide, worth 8*l.* 10s. per fm. The north lode, west of Bush shaft, in the 10 fm. level, is 1 ft. wide, yielding some good work for tin.

LOSTWITHIEL CONSOLS.—Capt. J. Offord (July 19) reports—The end is full of mundic, and very wet, and the lode, consequently, very near at hand; the ground is still very hard. We were in 11 fms. on Monday at the furthest point, and our calculation for the distance of the lode was 14 fms. The men are doing all they can to get through the ground, though the latter is very stubborn, not uncongenial, however, for ore.

MENDIP HILLS.—The agent (July 10) reports—The lode in the 38 fm. level, south of shaft, continues without any alteration, being about 1 ft. 6 in. wide, composed of a little flookan, soft spar, and iron; ground not quite so hard for driving as it has been; present price, 60s. per fm. In the slag department, we continue to remove the top rubbish from off the beds of slags towards the eastern part of the valley, where we find it to be about 11 ft. tl ic's, some part of which is work of fair quality; and, speaking from the appearance of that at present lying bare, I think we shall shortly find a great improvement in the slags.

SOUTH WHEAL BETSEY.—Capt. J. Spargo (July 19) reports—We have cut through the branch, which we believe to be the property of the new lode; it is about 4 ft. wide, underlying about 1½ ft. in a fm., with most excellent stones of lead, which is 3 in. more underlie in a fathom than the lode at the surface; in driving west from this branch the ground is favourable for driving; we have also cut a large stream of water, which we expect proceeds from the lode before us; in the east cross-cut the ground is still continuing favourable; we have also cut a stream of water very powerful, penetrating through the crevices, or fissures, of the country; we expect we are getting near the lode, as the country, or clay-slate, is impregnated with jack and spots of lead, and small veins of carbonate of lime.

SOUTH WHEAL MARIA.—Captain G. Francis (July 20) reports—The ground in the south cross-cut continues with little or no alteration. We calculate that we have now reached the south lode to within 5 or 6 fms., which will take about as many weeks to accomplish. The dam in the north cross-cut keeps back all the water on that side of the engine-shaft, which enables us to draw a much greater quantity than we now have, provided we increase the water, by intersecting the south lode.

SOUTH WHEAL TRELAWNY.—Capt. W. Jenkin (July 17) reports—We are still driving the cross-cut west of Snell's engine-shaft, with a full supply of men—ground favourable. We have also completed the fixing of the plunger-lift, without any accident. The engine works remarkably well. I hope we shall see the lode in the 30 fm. level soon. There is not one minute to be hindered in the cross-cut.

TAMAR SILVER-LEAD.—Capt. J. Sprague (July 17) reports—The engine-shaft is south 9 ft. below the 175 fm. level; the lode in the shaft is 18 in. wide, good saving work; in the 175 ends, both north and south, no lode has been taken down since last report. In the 160 end south the lode is 6 ft. wide, composed of capel and mundic. In the 145 end no lode has been taken down for the month. In the 135 fm. level the lode is 3 ft. wide—18 in. of which is good saving work. I am happy to say some of the tributers are making fair wages, and through this means we may expect a little increase in our sampling. At the north mine the engine-shaft is sunk 2 fms. 4 ft. below the 70 fm. level; the ground is somewhat improved for sinking within the last few days. The winze, sinking below the 60 fm. level, is suspended for the present—the water being so powerful, the men could not get on satisfactorily. We sampled, on the 1st inst., 74 tons 15 cwts. 1 qr. of rich silver-lead ores, which sold for 1348*l.* 16s. 2d.

TIN VALE.—Captain J. Floyd (July 15) reports—On Thursday, I, with Capt. Hooper, divided the tributers' part of the tin from the owners'—that is, we let the tributers have their half of the tin; the owners' part is now on the mine. The tributers carried their tin to market, and, I am happy to say, made 54*l.* per ton: they had their cash, and came back to the mine in good spirits, and paid their wheelers and labourers, so that they are all satisfied, and working in good spirits—tribute, 10s. in 1*l.* on the north branches. I am happy to inform you, since I wrote you on Wednesday, the branches are much improved going down under the adit; in this case, I would advise sinking down a winze on the said branches 5 or 6 fms., on tutwork, or as far as we can sink for water, to make stopes for the tributers breaking tin. The tributers sold their tin at St. Austell. The smelter, Mr. Martin, was so highly pleased with the good quality of the tin, that he said he hoped we should have a good mine, and that he would give us as good a price as any smelter in the county. He also said, our tin exceeded the average price of mining tin in the county 10*l.* per ton. I have also to inform you, our whim is erected on Aland's shaft, and we are working with vigour, night and day. We have gone through part of the great caunter lode; the part gone through is the north-west part, carrying some good stones of tin, and underlaying 2 feet 6 inches in a fathom. The other part of the lode will be in the shaft about 2 ft. deeper, according to my calculation, from the views in the 9 fm. level above, where the lode is split into two parts; the north-east part, in the said level above, is 3 ft. wide, producing good tin; and I see no reason why it should not do the same when we intersect the part of the lode in the shaft. I am at this time giving 80s. per fm. for sinking on the lode; the ground is favourable, being soft white granite. The water is rather quick, and can be expected to be no other, from such a large champion lode, although the whim keeps it tolerably well at present, and, I hope, will continue to do so. Rose's adit end continues to be hard; I am now giving 6*l.* per fm. for driving; but, I am sorry to say, it is not a price for the men to get fair wages, and I shall be obliged to augment the price at the next setting. I set but 6 ft. in extent, as I am expecting the ground to change for the better, by reason of there being so much water issuing out of the end, and Aland's shaft being so favourable above. Our dressing department is getting on with propriety, having commenced to dress a new batch of tin.

TINCROFT.—Capt. P. Floyd (July 17) reports—At Palmer's, on East Pool lode, the 80 fm. level west is worth 5*l.* per fm. for copper. The 70 fm. level west is worth 4*l.* per fm. for copper. At North Tincroft, the lode in the 100 fm. level east, is worth 6*l.* per fm. for copper. The 90 fm. level east is worth 10*l.* per fm. for copper; the winze, in the bottom of this level, is worth 6*l.* per fm. for copper; the 90 west is worth 4*l.* for copper. The 80 fm. level east is worth 10*l.* per fm. for tin. In the 60 fathom level east the lode is large, but poor. Highburrow lode, in the 142 fm. level, east of sump-shaft, is worth 15*l.* per fm. for tin. The stopes, in the back of the 120 fm. level, are worth 16*l.* per fm. for tin; Martin's east shaft is down about 9 fms. below the 120 fm. level; Martin's lode, in the 120 fm. level, west of engine-shaft, is worth 20*l.* for tin. On Chappel's lode, in the 100 fm. level west, the lode is large, with good stones of copper ore. In the 90 fm. level west the lode is worth 20*l.* per fm. for copper. The 80 fm. level west is worth 8*l.* per fm. for copper; in our last report we stated the lode to be worth 16*l.* per fm.; we have allowed the north part to remain for the present, which is worth 10*l.* per fm. for tin, in order to get the end forward to a run of copper ore gone up in the back of the 90 fm. level. Blight's shaft is now completed to the 70 fm. level. Dobree's lode, in the 58 fm. level east, is worth 5*l.* per fm. for copper; the 58 fm. level west is producing stones of copper ore. At Wheal Providence, the lode in the 33 fm. level east is 2½ ft. wide, composed of spar, peach, and flookan, with spots of ore. In the 33 fm. level, the lode is 2 ft. wide, but poor.

TRENANCE.—Mr. Dalton (July 12) reports—Saturday last, the 8th inst. was the pay and setting-day. The 20 fm. level north was set to drive by eight men—2 fms., at 4*l.* per fm.; the winze sinking had become a little softer when we commenced again; but the men had not been long at work before another flood of water put them out last Friday; since which time we have abandoned it, until I can get a suitable pump made to get out the water; the 20 fm. level south to drive by four men—1 fm., at 2*l.* 12s.; this end has become much softer, with a vein of steatite in it. The south-west level, in the 12 fm. level (Dalton's), is to stope up by four men—3 fms., at 2*l.* 5s.; this level was not looking so well, but has improved since Monday. Two pieces of malleable copper are coming in sight—one in the footwall, and the other on the hanging wall—about 14 ft. deeper than where the lump of malleable copper was cut from; there is also yellow ore in the south end of this work.

TRELEIGH CONSOLS.—Capt. W. Symons (July 15) reports—In the 120 fm. level, east of Christoe's shaft, we are driving on the slide, in search of Christoe's lode. In the 80 cross-cut south, east of flat-rod winze, we intend to cut the south lode. At Garden's shaft, below the 100, we are sinking in the country; in the same level, west of ditto, the lode is 2 ft. wide—but little mineral; in the 100 cross-cut south, west of ditto, we are driving on the cross-course, to cut the south lode. In the 90, west of ditto, the lode is 18 inches wide, with good stones of ore. In the 80, west of ditto, the lode is 1 ft. wide, without mineral. In the 90, east of ditto, east from cross-cut, the lode is 18 inches wide, worth 5*l.* per fm. In the 70, west of ditto, the lode is 18 in. wide, with a very promising appearance, and orey. In the 60, west of ditto, the lode is small—no mineral. In the 50, west of ditto, the lode is 2 ft. wide, with good stones of ore, but not to value. Wheal Parent engine-shaft, below the adit, is sinking in the country. In the adit, east on Parent lode, the lode is 2 ft. wide, with a kindly appearance, but not much ore. The adit cross-cut, north of engine-shaft, is being driven to cut Wheal Orphan lode, which we expect to do daily.

WEST WHEAL JEWEL.—Capt. Richard Johns (July 17) reports—In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, the lode is worth 5*l.* per fm. In the 57 fm. level, west of Williams's cross-course, on the same lode, the lode is not taken down in the past week; in the 57 fm. level east, on the same lode, the lode is worth 5*l.* per fm.; the rise, in the back of the 57 fm. level, on Williams's cross-course, is worth 5*l.* per fm.; in the adit end, west of Hodges's cross-course, on the same lode, the lode is producing stones of good ore. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 2 ft. wide, saving work, but not rich. In the 12 fm. level, west of Quarry shaft, on the same lode, the lode is unproductive; in the deep adit, west of Quarry shaft, on the same lode, the lode is 2 ft. wide, producing some tin work. The stopes, east of Pryor's winzes, that are working on tribute by six men, are worth 45*l.* per fm.

WEST WHEAL MARIA.—Captain T. Rodda (July 18) reports—In the western engine-shaft, the lode in the 74 fm. level west is about 3 ft. wide, composed of capel, spar, mundic, and spots of ore occasionally. In the 34 fm. level, west of Vivian's shaft, we have discovered another branch, about 4 in. wide; but at present unproductive. I have suspended driving this level, and removed the men to the 74 fm. level, to drive east on the course of the lode.

WHIDDEN MINES.—Capt. John Kernick (July 15) reports—The first of the south lodes has been cut in the deep adit cross-cut, south of caunter shaft; the assay has not produced any mineral worth saving, but I think it will be more favourable at its junction below with the great north lode. In the shallow adit, driving east in the hill on the great north lode, there is a gradual increase of tin, and the lode continues favourable for driving. The tributers in the back of the deep adit level have a wages' place in sight, which may lead to discoveries.

WHEAL SARAH.—Capt. J. Spargo (July 19) reports—The whim and connections have nearly completed; we hope to commence sinking on Monday next. In bringing up the lobby, we have fallen in with a hard range of elvan; but we got through with it; this elvan, according to its bearing, must cross the lode at a right angle, which, of course, is favourable. We have opened on a lode a few fathoms west of the mill-house, and have set 5 fms. to sink on it at 10s. per fm.; the appearance of this lode is so flattering, that we are very anxious to see it down in a more settled country.

WHEAL TREMAYNE.—Capt. William Blewett (July 15) reports—The lode in the 80 fm. level, east of engine-shaft, is 1 ft. wide, at present poor. The lode in the flat-rod shaft is 10 in. wide, producing good stones of copper ore; this shaft is sunk about 8 fms. below the 80 fm. level. The lode in the 80 fm. level, west of flat-rod shaft, is 1 ft. wide, producing 1½ tons of copper ore per fm. In the 50 fm. level cross-cut, south of Mitchell's shaft, the ground is favourable for driving. We expect to intersect the south lode in about four weeks' time. In the 30 fm. level, west of Thomas's shaft, the lode is 2 ft. wide, producing good stones of copper ore—the lode in this level has a very promising appearance. All other places in the mine are the same as when last reported.

WHEAL TRESCOLL.—The purser, Mr. C. S. Richardson, reports—We have driven 20 fms. east on the B lode, and find the ancient miners ha ve taken all the tin away above our present adit level; this proves that the lode must have been good work. We have driven a cross-cut north, and found another part of the lode, which, for distinction, we call lode B No. 2; we find it excellent paying work. The ground is much firmer here than in the adit level, and the hard run of ground we had in the adit end appears not to extend any great distance from that point, from which we suppose it to be merely a bunch of those granite boulders that are so common in this and all the adjoining setts. The engine-shaft is down 3 fms. under adit, in good sinking ground. We hope to be down to the 20 fm. level, under the adit, in eight weeks from this time, as per contract. Our stamps are working four heads 16 hours, and eight heads four hours of the day and night. We are fearful of a scarcity of water, should the dry weather set in. We have only about 20 men on the mine altogether, our underground operations being confined to the working on such lodes only as will make profitable returns. The contract for the supply and erection of the engine and boiler, chimney shaft, and all the engine connections, was taken by Messrs. Richardson and Webb, for the sum of 220*l.*, to be completed and set to work, without any extra charge, within 14 days from the date of its arrival on the mine. The engine has been sent down; it is one of superior workmanship; and, although of only 12-horse power, may, by a simple arrangement, be made into 20 or even 30-horse power; it is high-pressure, and has been used on the Croydon atmospheric line, in the working of one of the air-pumps. Its action in the shaft will be direct—consequently, will dispense with the use of a bob; it can be driven from 1 to 150 strokes per minute with a 2½-ft. stroke. It is intended to draw all the stuff from the mine as well as on the pumping, should the water not be too much, which it will do, if it does not exceed 71,500 gallons per day. The boiler is of sufficient capacity for a 20-horse engine; it is a tubular boiler, on the Cornish principle; it was proved, before being sent to the mine, up to a pressure of 109 lbs. to the square inch. It has been said, that this engine will do all the work of the mine, at a cost of only 7s. 6d. per day for fuel.

WHEAL VINCENT.—Capt. J. Spargo (July 19) reports—We have all but finished costeaning. The lode that I mentioned in a former report is opened on sufficient to see its size and quality; it is a very kindly lode, composed of fluor-spar, wolfram, and blue peach, with spots of tin; the lode is about 15 in. wide, underlying about 3 ft. in a fm.; the ground in the deep adit is more favourable for driving; and the lode, although not rich for tin, is much improved in size; but, as we get up nearthe old workings, we expect a greater improvement, as we have just driven through a cross-course that disordered the lode; in driving north to cut the south lode, the ground is very favourable—the granite being much decomposed; we have also cut a large stream of water, which, of course, proceeds from the lode before us. The masons are engaged in building a material-house, &c. We have also commenced sinking our new engine-shaft, but cannot see much of the nature of the ground as yet.

FOREIGN MINES.

BOLANOS MINES.—*Received July 20th (via United States).—Cerro del Bote Mine Report, dated June 5th.*—In San Genaro shaft, 10½ varas have been sunk during the month—the ground being still favourable for sinking; nor does the water appear to increase. This shaft is now 66 varas below the Victoria cross-cut; and there remains about 10 varas more to be sunk, which, in all probability, will be completed in the first week in July, to reach to the depth of the next proposed cross-cut, which will be 76 varas below that of Victoria. In Victoria cross-cut, from San Genaro side, our progress has been tolerably fair—having driven 12½ varas during the month; but, from Guadalupe east, the ground is much harder, and, consequently, less favourable for driving—therefore, our progress on this side has not been so good as I could wish—6 varas only being driven during the three weeks employed in driving. There was remaining, at the close of last month, according to measurement, about 12⅞ varas to make the communication—of which 5⅞ varas were driven from the two points during last week; and I hope to have it completed by the end of the present week, or the beginning of next. As soon as the communication is made, we propose to extract all the ores through San Genaro shaft, and to dedicate the four whims at San Fernando entirely to drainage, and the little stuff which may come from the cross-cut de la Compania, and which I hope will greatly facilitate our present mode of working, and, at the same time, enable us to increase the extraction of carga. No attempt has been made during the present month to regain the cross-cut de la Compania—one whim being employed about 12 hours in the day in the extraction of carga, and the remaining 12 hours in the water—consequently, the level of the water in the shaft has been from 5 to 8 varas above the head of the cross-cut.

In Poso de Guia, the vein is from 4 to 5 varas wide, and in good ore, with the exception of not carrying so much native silver, as I have seen in the vein heretofore; in fact, during last month, I have observed that, in almost all our workings, the native silver has disappeared, which accounts for the lowering of leys. In plane No. 2 west, the vein, during the first weeks of the month, became very much disordered and poor, and the ore was of low ley; but since then, I am pleased to say, it has considerably improved, and the leys are again getting up. The workings to the east of Poso de Guia are also in very good ore. In the eastern planes, in the bottom of Guadalupe level, the vein improves as we progress in depth, and the ore seems to extend, both east and west, from these workings—so that, by the present appearances, I think, by the time these planes reach the depth of Pozo de Guia, the whole vein will be in fruits between the Pozo de Guia and our most easterly stopes. In the Cielo, in the back of Guadalupe east, we placed a few paradas to work, on trial, at the beginning of the month; and I beg to inform you, that the vein has a good deal improved, and that we are now raising some tolerably good ore from this point. The vein in the upper level of San Antonio, has again become poor, and the leys of the ore, during the last two weeks, has considerably fallen off.

June 6.—Enclosed I beg to hand you the usual monthly accounts and statements for May, which I trust will be found correct. Since I last had the honour of addressing you, our progress has been good in all our workings. The water in San Fernando has been kept easily from 5 to 8 varas above the Compania cross-cut, and by day we have extracted ores with one whim. I mentioned to you in my last the scarcity of workmen, and it was not until last week that we were able to get a sufficient number. As soon as the communication is made in the Victoria cross-cut, our extraction will be made through San Genaro, in order to enable me, with the four whims in San Fernando, to lower again the water below the Compania cross-cut, and finish cutting the lode in it. The excavation for the foundation of the engine-house will be finished to-day. The dry season continues with such force, that there is a very great mortality amongst the cattle; and, until the rains set in, I have not the least hopes of moving the stone from the quarry to the mine, I must, therefore, wait with patience until the weather changes, and I then may be able to begin building the engine-house. Since I last wrote to you, I have had all the bars assayed for gold, but only a slight trace of that metal has been found in three or four. Perhaps, by keeping the ores apart, as I am now doing, we may be able to get a ley of gold in the silver produced from those ores. The ores, I am sorry to say, are not so good as they were, but still I fully expect that they will reach 6 mcs. per monton, and that by quantity we shall make up for what they have lost in quality.

CARWINNING HILL.—The official reports from this mine represent the improvements as progressive and satisfactory. Fifty tons of copper ore of rich per centage were shipped on the 17th for Swansea.

WHEAL MARY ANN MINING COMPANY.

At a two-monthly meeting of adventurers, held at the mine, on Wednesday, the 19th inst., the accounts were examined and passed, showing—Labour cost, April and May, 759*l.* 9s. 6d.; merchants' bills, 206*l.* 18s. 8d.; lord's dues, 85*l.* 2s. 7d. =990*l.* 2s. 3d.—By ores sold, 1051*l.* 10s. 9d.: leaving balance in favour of the mine of 61*l.* 8s. 6d., which, deducted from balance against the mine to end of March, reduces that balance to 262*l.* 18s. 3d.—The lode in the 52 fm. level, at Wheal Trelawny, being small and poor, it was suggested by some of the adventurers, at their general meeting, that the Wheal Mary Ann adventurers ought to pay some part of the cost of driving the remaining ground, on their being allowed to take the level into their mine.—It was resolved, that it be left to Capts. P. Clymo and J. Bryant to meet and settle the proportion to be paid by each mine; and, if they cannot agree, they are at liberty to call in a third party, whose decision shall be final.—The following report, from Capt. Peter Clymo, jun., was read:—

Wheal Mary Ann, July 19.—The 40 fm. level is extended south of Barratt's 5 fms.; th lode now in the end is 3 ft. wide, and will produce 1 ton of lead per fathom; the stopes, in the back of this level, are looking very well. The 30 fm. level is also driven south of the above shaft, on the course of the lode, about 84 fms., and the greater part of that distance through an exceedingly promising lode, composed of gossan, can, and lead, varying in size from 1½ to 4 ft. The lode now in the end is altogether 6 ft. wide; the eastern part of which, for 2½ ft. wide, will produce 6 cwts. of lead per fathom; and, from the appearance of this level generally, I think we may fairly calculate on having an excellent course of lead in the 40 fm. level. The stopes, in the back of this level, are producing a fair quantity of lead. Pollard's shaft is sunk 9 fms. 5 ft. under the 30 fm. level. The lode in the 30 fm. level, north and south of this shaft, is 1 ft. wide, composed principally of can, with spots of lead. On Friday, the 4th of August, we intend sampling 60 tons of ore.—We expect to get our crushing-machine to work in about a fortnight, which will effect a great saving in our dressing department. Our balance against the company is not reduced to the extent I expected, as our last parcel of lead did not realise so much, by 2*l.* per ton, as I calculated, according to the produce.

WHEAL TRELAWNY MINING COMPANY.

A general meeting of shareholders was held at the Fountain Inn, Liskeard, on Tuesday, the 18th inst.—Capt. JOHN BRYANT in the chair.—The accounts were presented, showing—Mine charges for March, April, and May months, 3344*l.* 17s. 1d.—On sale of lead, credited in February audit, 35*l.* 16s.; by sale of lead ores, 88 tons 7 cwts. 1 qr., at 13*l.* 6s. 6d. per ton, 1221*l.* 7s. 5d.; 89 tons 8 cwts. 3 qrs., at 14*l.* 4s. per ton, 1269*l.* 14s. 3d.; Wheal Trehane adventurers, for use of engine and water, to dress ores for three months, 49*l.* 10s.—Leaving a balance of 768*l.* 9s. 5d., which, deducted from balance end of February, of 862*l.* 19s. 3d., leaves to credit of next account, 94*l.* 9s. 10d.—The miners' earnings for the three months average 2*l.* 16s. 6d. each per month.

The following report from Capt. John Bryant was read to the meeting:—

Wheal Trelawny Mine, July 17.—The ground in Phillips's shaft is still favourable for sinking under the 62 fm. level. The 62 fm. level is extended north of Phillips's shaft 10 fms. 3 ft.; the lode in the end is 2 ft. wide, composed of can, quartz, mundic, and lead, worth 10*l.* per fm.—this level is extended south 12 fms.; the lode in the end is small, producing stones of lead; the rise in the back of this level is worth 9*l.* per fm. The 52 fm. level is extended south of Phillips's shaft 33 fms. 3 ft.; the lode in the end is rather unproductive at present; this level is extended north 34 fms.; the lode in the end is 1 ft. wide, and worth 5*l.* per fm.; the stopes in the back of this level are yielding a fair quantity of lead; the winze is sunk under this level 5 fms. 4 ft., where the lode is worth 10*l.* per fm.; and we daily expect to hole to the rise in the back of the 62 fm. level, when we shall be able to commence stoping the back. The 42 fm. level is extended 32 fms. north of Trelawny's shaft, and within about 20 fms. of Wheal Trehane boundary; the lode in the end is 2 ft. wide, composed of can and lead, worth 8*l.* per fm.; the stopes in the back of this level, and in the 32 fm. level, are yielding a fair quantity of lead. Trelawny's shaft is sunk 10 ft. below the 52 fm. level, where the ground is favourable for sinking. The 52 fm. level cross-cut is driven west, towards the lode, 6 fms. 2 ft., where we expect to meet with it in about four weeks. The 22 fm. level cross-cut is extended east of this shaft about 30 fms., where the ground is rather hard for driving. Smith's shaft is sunk 14 ft. below the 30 fm. level, and down to water; the lode here is worth 6*l.* per fm. Since having met with water in the shaft, we have removed the men to sink a winze under the 30 fm. level, about 10 fms. north of Wheal Trehane boundary, where the lode is worth 6*l.* per fm.—I expect we shall be able to sink here several fathoms. The parcel of ores, computed 90 tons, was sold yesterday to Messrs. Walker, Parker, and Co., at 13*l.* 13s. per ton. The ores sold for some considerable time past have been credited one month in advance of the costs—consequently the principal shareholders advised at our last general meeting to bring in three months' expenditure against two months' ores, in order to show a true statement of the accounts, which is accordingly done, that the costs may in future be brought against the ores raised in the same months.

MINING COMPANY OF IRELAND.

The half-yearly meeting of this company was held on Thursday, the 6th inst., at the company's office, Lower Ormond-quay, Dublin, for the purpose of receiving from the directors the report and statement of accounts for the past half-year, and to elect auditors for the ensuing year. Mr. GIBBON in the chair.

MR. PURDY, the secretary to the company, read the following report:—

The Slieveardagh Collieries, Tipperary.—When your board last addressed you there was good reason for expecting that the unfavourable circumstances which then affected the company's interests would have been ameliorated, so far as regards the collieries, by the abundant and well-saved harvest of last season, which in ordinary times would have induced extensive operations in preparation of land for the ensuing crops, in which case enlarged demand for culm (small coal), for burning lime, would have resulted. In this expectation your board has been disappointed; and although in the absence of demand for culm, one-fourth of the men usually employed have been discharged, and the remainder limited to half-time, there has been a further accumulation of stock on bank at the collieries, which now amounts to 17,071*l.* 14s. 11d., at a reduced valuation—and your profit from this branch of your works is still further reduced in the half-year ended, by reduction of price to induce sales. The present prospect, as regards demand, is much more favourable than that adverted to in your board's former report; and demand alone being requisite to ensure ample remuneration for the capital embarked in the collieries now so extensively opened, your board waits anxiously for the revivel of agricultural prosperity, which heretofore produced such beneficial results to the company in the coal district. In the meantime, Earl's-hill Colliery has been opened, and the coal proves to be large, and of excellent quality.

Lisnacon Colliery, Cork.—The level for unwatering Lisnacon Colliery has been driven 1148 yards.

Knockmahon Copper Mines, Waterford.—The unfavourable circumstances with which the company have had to contend for some years in working the Knockmahon Copper Mines, have been augmented in the past half-year by a further reduction of considerable extent in the price of copper, by which your ordinary profit upon the large amount of capital invested in opening the mines has been altogether absorbed, although 2065 tons of ore was obtained, which cost 10,283*l.* 14s. 7d.; and further expenditure has been incurred in searches and other works, with a view to permanent improvements, amounting to 775*l.* 0s. 7d. From this result it may be inferred, that the period has arrived when the question of rent must be adjusted, or a change of system adopted in working the mines, so as to prevent, if practicable, further loss to the company. Hitherto the state of the law as regards rent of mines on settled estates in Ireland prevented the consideration of this question by landlords and trustees, but this difficulty has been removed by the Legislature in the present session, at the instance of Government, to whom, and more especially to his Excellency the Lord Lieutenant, the thanks of the country are due for effecting this improvement repeatedly sought for from previous Governments in Ireland. Trustees being now empowered to make equitable arrangements with tenants of mines, hopes are entertained of an early arrangement, which will admit of more extensive, and, consequently, prosperous operations at these mines, and some progress has been made in a negociation with that view. Your present stock of copper ore is valued at 5985*l.* 14s. 8d.

Luganure Lead Mines, Wicklow.—The works announced in former report as being then in progress at Luganure Mines, with a view to discovery of additional bunches of ore, have been continued without interruption, and have occasioned further outlay in the past half-year, amounting to 593*l.* 2s. 6d. above the value of 163 tons of ore obtained, and no valuable discovery has yet been made, although the indications have been, and continue to be, encouraging. Your stock of lead ore at these mines, and the smelting-works, is valued at 849*l.* 15s. 8d.

Ballycorus Lead-Works, Wicklow.—The lead mines having been unproductive, your smelting and manufacturing establishment has not yielded profit, the limited scale of operations not being sufficient to effect that object. Your stock of lead at the works, and in store, is valued at 7500*l.* 19s. 7d. The company's claim, under the decree in the cause, "Neligan *v.* Audley," has been increased by further arrears of interest, making the amount due 13,670*l.* 10s. 11d., and the solicitors who have charge of the decree are preparing title preparatory to offering the estate for sale. The other assets of the company consist of—bills and cash, good debts, and mining materials not in use, 9244*l.* 11s. 2d.; mineral produced, 31,408*l.* 5s., being an increase of 2912*l.* 1s. 2d. in the half-year; and the mines with machinery, mill-sites, &c., 140,068*l.* 1s. 8d. at cost, whilst the company's liabilities amount to 13,860*l.* 8s. 7d. Under the circumstances thus set forth, your board cannot recommend a dividend on the present occasion.

The CHAIRMAN mentioned that a resolution had been adopted by the directors, that the book for the transfer of the registry of shares should be open to any proprietor who wished to examine it on every Saturday during office hours.

MR. PURDY then read a statement of accounts for the past half-year.

The CHAIRMAN then addressed the meeting, and said he wished it had been possible to give the proprietors a better account of the affairs of the company; still he saw no reason why they should despond. In comparing the present half-year with the last, he found that they were very nearly the same. The mineral produce during this half-year had been 3000*l.* more than in the last; however, they were not able to show a profit upon the working of any of the mines, on account of the distress of the times. (Hear, hear.) Under those circumstances the board had turned their thoughts to the reduction of the expenses, and accordingly they had, within a short space of time, discharged from the collieries upwards of 100 men, whereby the establishment had been reduced considerably, and the men were working only three days in the week, with the view of lessening the expenses still further. The quantity of culm raised was such that it would be sufficient, if sold, to pay all the engagements that they were under. As to the Knockmahon Mines, they had been unproductive during the past half-year. A great number of people had been put out of employment there, and the expenses proportionably reduced, until such time as there should be a change in the copper market, and some prospect of the mines yielding a dividend. The proprietors would easily see, that owing to the scarcity of money in these times, the directors had had a great deal to do in order to carry on the works, and keep the mines in that high state of preservation which was requisite to ensure their being available at a future day. On looking to the collieries, they (the meeting) would see that they were a matter of very great value. He considered that they would be a source of very great profit to the company at a future day. From the time of their commencement to the present, they had yielded 57,286*l.* 16s. 11d., with a loss of 4966*l.*, which left a clear profit of 52,000*l.*—(hear, hear)—and, considering that they were now in such working order, as to be capable of putting out three times the quantity of produce that was drawn from them, the proprietors would see that nothing was now wanted but a demand for that produce, in order to make them yield a dividend. As to the copper mines, the negociation connected with them was still going on. It appeared to him that there was a reluctance, on the part of the directors, to complete any arrangement without a great modification being made in the demands of the proprietress of the land. However, he hoped that, considering the present state of the copper market, and the impossibility of copper rising to a high price for a very long period, the lady would see the reasonableness of granting such a lease as would leave the company hopes of making a profit, as no profit at all was derived from the copper mines which were formerly so profitable, and the working of several of those which were not yielding anything would be suspended, with a view to the further reduction of the expenditure. They had, however, from the first yielded 92,067*l.* 19s. 3d., independent of all loss; and, considering that new discoveries might be made of valuable veins of ore, there was every hope that those mines might again be worked as profitable as ever. The proprietors would see, that under all the circumstances, the greatest energy was required in order to make those mines profitable—because not only the working of them had to be taken into account, but also the state of the copper market, and legislation had rendered competition with foreign ore in their own market more difficult. However, the chief demand for their copper had been from France, and the countries contiguous to it, which being now in a state of commotion, no orders were coming from them. The chairman went on to say, that whenever there should be any improvements to be made, he was sure that the directors, who had hitherto co-operated with him in a most assiduous manner, would continue to do so.

MR. PERRY stated, that the company owed no trading debts whatever.

A PROPRIETOR inquired whether, in the most prosperous days that the company had ever seen, there had been a demand for as much culm as was now raised?—The CHAIRMAN—I don't think there ever was.

MR. CHAYTOR said, that the information which they had received with respect to the collieries was very satisfactory. It was very gratifying and very encouraging, that from the commencement the profits derived from them had been so considerable, while the outlay had been so small. There was reasonable ground for the expectation that, when the country had recovered from its present position, the profits would be much increased. With respect to the land question, the difficulties which were in the way of the company obtaining a lease had been removed by an act of the Legislature; but, there still remained another difficulty, arising from the demand made by the proprietress of the land, of a large outlay by the company. Now, he thought, considering the spirited manner in which that concern had been worked from the commencement, it was a little ungracious to demand from the company terms to which they could not reasonably accede. It would be exceedingly bad policy on the part of the proprietors of land not to encourage the company by coming to such terms as would enable them to prosecute the working of mines in a spirited manner. He trusted that eventually the negociation in question would be terminated in the manner which would really be most favourable for the interests of all parties.

The CHAIRMAN said, that in carrying on that negociation the directors felt that it would be bad policy to put themselves under conditions that could not be carried into effect, looking to the state of the copper market, and the interests of the parties. They conceived it would be much better to go on endeavouring to get such terms as were reasonable and fair, than to venture upon a large expenditure in making discoveries of new mines, which might result in disappointment.

MR. PERRY said, that the negociation was at that moment in an advanced state, and as far as the directors could see, was likely to be brought to a satisfactory termination. The report and statement of accounts had put the proprietors pretty well in possession of the state and prospects of the company; but one matter had not been noticed, with which it were well to make them acquainted—it was this, that while the company owed 13,000*l.*, they at that moment possessed available assets, convertible property, to the value of 55,376*l.*—(hear, hear)—which gave a surplus of 41,516*l.* over and above all their debts and engagements. They had, in addition to that, mines in operation which, with all their appendages, had cost the company 108,000*l.*; and, although these had not been productive within the last half-year, they had yielded very ample returns in times past, and he saw no reason why they should not do so again. These mines were altogether independent of others which had been wholly abandoned, and which cost the company 30,000*l.* more. During the last 13 or 14 years, the mines which he first mentioned had yielded them the means of paying back to their proprietors in dividends 150,000*l.*, which was 10,000*l.* more than the amount of their original capital; so that, judging by the experience of the past, those mines would, at some future period, realise a large income to the proprietors. He thought it well to set these facts before the proprietors, in order to prevent them from being discouraged. Mr. Perry concluded by moving the adoption of the report and statement of accounts, and that 350 copies of them be printed and circulated amongst the proprietors.—The resolution was seconded and passed.

Messrs. John Ennis, William Hopkins, and Henry Pim, were then appointed auditors for the ensuing year.

MR. TAYLOR inquired, whether it was the intention of the company to pay off their debts, and to make a call?—The CHAIRMAN said that, in reply to the first part of Mr. Taylor's question, he could answer that it was the intention of the company to pay their debts; but, as to making a call, there was no intention of doing so.

MR. TAYLOR said, he heard that the company owed a great deal of money, that some parties felt dissatisfied at it, and that there was likely to be a pressure from without, which would induce the directors to make a call.—The CHAIRMAN: I mentioned the subject of a call to the directors at the last meeting of the board, previous to this half-yearly meeting, and then their opinion was, that it was not necessary to mention it again.

MR. PERRY observed, that the observations of Mr. Taylor were the only indication that he was aware of, of a pressure from without to induce the directors to make a call.

A PROPRIETOR said, it would be satisfactory to know whether any gentleman had sold their shares.—The CHAIRMAN: The transfer books are open, and any gentleman who wishes can look at them. For my part, I have not sold a single share which I possessed in this company; and I believe I can say for the other directors, that none of them have parted with any of theirs either. (Hear, hear.)

MR. BARTON was then called to the chair, and the usual thanks having been passed, the meeting separated.

CAMERON'S STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

A meeting of shareholders was held at the London Tavern, Bishopsgate-street, on Monday last, the 17th inst., for the purpose of receiving the report of the deputation, appointed at the meeting of the 20th June last, to proceed to Swansea, and examine into the state of the property of the company (see *Mining Journal* of the 24th June). About 100 gentlemen being present, Col. CAMERON entered the room, and observed that, previously to their appointing a chairman, he trusted they would allow him to offer a few observations. He attended there merely as a shareholder—as he understood that the last, the present, and all such future meetings, were intended to benefit the company, and improve the property: this was his earnest desire, and must be the wish of all interested; but his object was to show them that the last, and all further, meetings were illegal.—Here the speaker was interrupted; and some conversation took place, as to the legality, or illegality, of such meetings. It was contended, that any number of private individuals had a most undoubted right to meet by appointment, and consult together for taking measures with respect to any property in which they might be interested. This was not by any means contradicted; but Colonel Cameron contended, that the results were, in point of law, ineffective towards the body of shareholders, as a company, unless every shareholder had due notice, under the regulations as laid down by the Act of Parliament, and in the Deed of Settlement. After some further discussion on the point—Mr. CHARLES BURLS, jun., was called to the chair.

The CHAIRMAN observed, that he had been placed in the chair at a former meeting by their kindness: it was immaterial to him whether he was placed there or not, but he would endeavour to discharge his duty. It was quite clear that, as individuals, they had a right to meet; and as he thought the last meeting had done some good, and that the aspect of affairs had improved, it was better to proceed. It might be supposed that he felt the deepest interest in the prosperity of the undertaking—himself and connections holding about one-twentieth of the shares. At the approaching meeting they would be called upon for further advances, and to empower the directors, after that produce was expended, to raise further capital; and he asked them if, under the present state of affairs, they could consent to any such measure. The deputation had proceeded to Swansea, as appointed at their last meeting; and, after the most careful investigation, had drawn up an elaborate report, which, with their permission, he would read to them.

Col. CAMERON here observed, he had serious objections to the report, and handed a written document to the chairman, who, after some conversation, put it to a show of hands, whether the report should be read, or Col. Cameron be heard, when it was unanimously resolved to hear the report.

It was signed by Messrs. R. Bennet, C. Burls, W. W. Taylor, and T. Mandeno, and stated, that the expenses of the wharf at Swansea, including labour, salaries, &c., was 330*l.* per annum; that the coals daily brought thereto was from 60 to 80 tons, where it was heaped in the several divisions of "hand-picked," or steam, "all-through," or mining, and "small." That, during the past year, 13,000 tons had been sold from the wharf, at prices as follows:—"hand-picked," 9s. 6d. to 10s. per ton; "all-through," 6s. 9d.; and "small," 5s. In the directors' report, of the 29th January last, they stated that the wharf was purchased; it was found, however, that it was only rented on lease, at 155*l.* per annum; the quay wall was only two-thirds completed, and no progress making in any of the other works. This wharf was of the utmost importance to the company, as it would be capable, when completed, of doubling the shipment of coal. The contractor had a claim of 175*l.* long overdue, and 150*l.* more on completion. The corporation also had a claim for 720*l.* 14s. 7d. There was stabling complete for 76 horses, and, at a short distance, an empty building, which probably accounted for the statement in the directors' report, that there was room for 100 horses. The buildings, as far as they had gone, were planned and completed with excellent judgment. The report of January, 1848 stated, that 40 cottages had been erected—the deputation could only find 10. With regard to the facilities for raising coal, it appeared that the steam-power was capable of raising 200 tons per day; but, at present, only 100 were raised, and up to June last 19,400 tons had been raised in the year. There appeared to be an average loss of 2s. 1d. on every ton sold. They calculated that the entire management in London and at Swansea cost the company from 4000*l.* to 5000*l.* per annum, besides interest on capital. From these facts the deputation made the following deductions—that, through pernicious management, the original objects and prospects sought could not be realised; that dividends had been paid out of capital and borrowed money, and not profits; that if the management was not changed, the entire capital must be lost; that to furnish even the 5 per cent. promised in the prospectus, 120,000 tons of coal per annum must be sold; but there were no such prospects; they, therefore, recommended, an entire change in the management, reduction in expenses, an effort to be made to raise more coal, and to create greater sales, by opening railway accommodation. That it would be an entire waste of money to proceed with the Swansea and Loughor Railway. A junction with the Llanelly would cost 4000*l.*; but as the South Wales line was rapidly progressing, and it would require a branch of only a mile to join it, it was considered that they were the best parties to negociate with; they had offered to carry coals, if guaranteed 200 tons per day, for 7d. to 1s. per ton. In the present state of their affairs, however, they recommended no outlay whatever for railways. They deprecated any outlay whatever for ships, as freights were low. Under new and prudent management, when the interests of all should be the rule of action, the deputation felt confident that success would arise. The powers possessed by the shareholders under the Act of Parliament were more than adequate to the emergency; and if these powers were immediately and extensively employed, it would convert what is now apparently a total loss into a substantial and remunerative property.

The CHAIRMAN said, this report would have been in hand on the previous Tuesday, and the meeting called earlier, but they had endeavoured to obtain an interview with the directors. Mr. Howden had, however, written to them on the 13th inst., stating that they could not recognise the deputation, but should be most happy to take into consideration any suggestions they might make. The deputation had, in four days, got through a most elaborate inquiry; they had not depended on the evidence of the agents and servants of the company, or their own observations, but had consulted shippers, shipowners, miners, agents, &c., in the neighbourhood, as to quality and quantity of coal, cost at pit's mouth, carriage to shipping place, freightage to London, &c. It would appear they were paying 2000*l.* a year royalty on only 19,000 tons of coal raised, which must be a heavy loss, and which, if not paid within a certain period, the whole property must revert to Col. Cameron, who, with his family, held about 1100 votes. As to the statements made in the report, he hoped the colonel would be able to contradict them, but it must be on evidence; they had had sufficient of mere reference; the report was a fair exposition of facts, and must be met by such.

Colonel CAMERON here rose in explanation. He objected to the report, as being the production of Mr. W. W. Taylor, formerly in the company's service. He was the author of the original prospectus of the company, and why did he not carry out in practice the theoretical effusions of his own brain? Had the affairs been managed as he had continually recommended, things would have worn a very different aspect; but he was no dictator, as had been charged against him. Still he believed the property to be most valuable, and that it would have borne out all the prospectus promised, if properly carried out in the first instance. He had, very naturally, the best interests of the company at heart, holding, as he did, so large a stake; and he believed, that however dissatisfied the body of shareholders might feel, everything would be most satisfactorily explained at the ensuing meeting.

MR. TAYLOR, who was present, was asked if the original prospectus could possibly have ever been carried out? He said, yes; he had never denied it; he had not now changed his mind; there was at present a loss on the coal, but the whole management might be improved to a profit.

The CHAIRMAN declared they had had no conversation with Mr. Taylor when they made their report.—Mr. SMALLBONE said, he had examined the property; he had sent down his agents and relatives, and all agreed in it being of great value. In extent it was eight times the size of Greenwich Park, under the whole of which was an enormous quantity of the most valuable coal, particularly for steam purposes, and would always command a large sale. This gentleman here put some questions to Col. Cameron, from a written document, to the following effect:—Would he, at the ensuing meeting, support the appointment of a committee of six shareholders, to investigate the affairs of the company—have access to all books, papers, &c.—to take steps for a complete change in the direction—three to represent the Cameron interest, and six from the shareholders—and to undertake not to make any more calls until this was effected?

Colonel CAMERON said, that they must hear both sides of the question before they could decide. He declined to give any direct promises on a subject so closely affecting the directors, who were absent, and he would say nothing behind their backs; he would do everything in his power to bring about the restoration of the property, while he felt persuaded that at the meeting much of the present prejudice would be removed.

A very long conversation ensued, which we cannot follow—in the course of which Mr. STRELLY, one of the auditors, said, he could not allow the meeting to separate, without stating that the Messrs. Cameron had declined touching one farthing of 2000*l.* owing to them as directors.

A resolution was then passed, adjourning the meeting.

The adjourned meeting was held yesterday (Friday), at the London Tavern—Mr. C. BURLS, jun., in the chair.

The CHAIRMAN, in opening the proceedings of the day, observed, that the meeting held on Monday last had not only been interrupted by the presence of Col. Cameron, to which he raised no objection at the time, although that gentleman was not actually a shareholder, yet his interest being mixed up with the question at issue, and, moreover, his family holding a large interest in the colliery, he thought it only right that gentleman should be present. Not to advert further to the interruption, he begged to observe, that there were one or two points to which he considered the especial attention of the shareholders should be directed. He must confess, as a shareholder, in common with others, he had heard that which he did not expect, and it would be for him to convey to the meeting the information acquired for their government. As he had already observed, from the circumstance referred to, several material points had been passed, to which it was now his duty to call their attention. The importance of the question at issue was deemed, by the committee appointed by the shareholders, to be such as to warrant them in availing themselves of legal assistance; but such course was not resorted to until all chances of negociation with the directors had passed away—a second application made to that body having been unattended with success. It was for the interests of the shareholders, and in every sense most desirable, that there should be unity of action; but such, unfortunately, could not be secured. The committee, feeling the responsibility imposed on them, had, after much consideration, determined on availing themselves of the services of Mr. S. Fry, one of the firm of Fry, Locksley, and Fry, who were concerned for certain shareholders who were averse to the course pursued by the directors, and who were, moreover, interested, as solicitors, for parties who were landholders on the proposed line of railway. The two important points submitted to that gentleman, whose opinion would be given, and which was, moreover, supported by that of counsel, were—1. The exact position of the shareholders as to their liability; and—2. That of Colonel Cameron. He (the chairman) must confess he was most grievously disappointed with the reply given by that gentleman to the first question, inasmuch that it appeared every shareholder, no matter what interest he might hold, was personally liable to creditors for the full amount of the debts due them. This was one of the clauses under the Joint-Stock Companies' Act, by which they were governed, which alone provided for certain proceedings *inter se*, and in no way protected the shareholder from any proceedings which might be instituted against one member of the company, whose resource alone was that of further applying to the court to render others associated in the adventure responsible, *pro rata*, but which, in no way, had reference to, or guided, the course to be pursued in the original action. He would not pretend to give to the meeting any account of their liabilities, at the present moment, for he had not seen the accounts of the company, which should have been prepared; but he might observe, *en passant*, that there was a sum of upwards of 700*l.* due to the corporation of Swansea. There were also moneys due to Mr. Page, the engineer; and if this money was due, and so acknowledged, why should legal proceedings be instituted for its recovery? A considerable claim was also made by Mr. Dagleish, the consulting engineer or colliery viewer; while he need hardly say, that he might fairly assume a good round sum as due to the solicitor, who never failed, on occasions like the present, to make out a long bill. Under these circumstances, it must be apparent that, should the ensuing calls prove insufficient for prosecuting the workings, and the construction of the railway, then every shareholder becomes personally responsible, assuming that all the calls be duly paid; and hence the necessity of their measures being carefully carried out as to their legality. Having lately visited Swansea, he found out that it was the intention and determination of the directors to lay out a large sum of money, the benefits arising from which, in case the colliery should be abandoned, he need hardly say, would be reaped by the Cameron family. He had it on the information of Mr. Atkinson, the manager, that a further sum of money, and that to a considerable extent, would be required, so as to carry out the objects and intentions of the directors; and, moreover, in the underground operations, it appeared that they had met with a fault, or dislocation of the strata—the consequences of which would be attended with a serious expense, and possibly the cost of a new winning. It being thus quite clear, not only from the notification put forward by the directors, but the information gathered by him on the spot, that a large sum would be required, he could not but arrive at the conclusion, that its expenditure, should such be found necessary, should be placed in the hands of parties interested in the colliery, from the large stake held by them; and that the management should be at once removed from the present board of directors, in whom, he had no hesitation in saying, he placed no confidence. The main object of the present meeting was, therefore, to determine on removing the present board, or to obtain such a preponderance in the direction, as would secure a limit being placed upon the expenditure. He would further observe, that in case of a further call, be considered Col. Cameron's family must pay upon their shares. Mr. Fry, however, having entered the room, he begged to call on that gentleman for an explanation as to the position in which the shareholders were placed.

MR. FRY entered at some length as to the original deeds, or agreements, on which were based the formation of the company. From these, it appeared that in 1841 Col. Cameron, by deed of agreement, or assignment, made over to his son his interest in the estate, or right of working the colliery, on the payment of 1s. per ton royalty; and there was also a further assignment of property, at the dues of 6d. per ton, to Col. Cameron, independent of other charges, or dues, payable on that property, which was held under lease. On the 14th of November, 1845, the son of Col. Cameron, to whom the grant, or assignment, was originally made, entered into a further agreement with Messrs. Cooper and Simmons, whereby he assigned over to them the property, on lease for 50 years, for a consideration of 150,000*l.* On the 15th of November, or following day, another document was executed by Messrs. Cooper and Simmons, securing to Col. Cameron his original rights and indenture, drawn up between Col. Cameron and his son. The company was subsequently formed with a capital of 200,000*l.*, divided into 20,000 shares, of 10*l.* each—it being understood that Col. Cameron's family should be entitled to 7000 shares, as paid up; but it appeared that there was no proviso to prevent sales being effected, although such was clearly understood. An Act of Parliament had been obtained for the construction of the railway, to convey the produce to the port of Swansea, which, so far as applied to the capital required for such purpose, limited the responsibility of the shareholders; but such was not the case as affected the colliery. The Deed of Settlement, by which the company was governed, did not comprise any such limit, the company being, in fact, under the Joint-Stock Companies' Act—the effect of which was, that they had redress at common law, whereas they would otherwise be forced into a court of equity. The position in which the shareholders were placed was simply this—a creditor, after having recourse to the property of the company, would, should such be found unequal to meet the claims, have it in his power to proceed against any shareholder.

MR. WYCHE would observe, that the shareholders were not personally responsible, until the property of the company had been first exhausted, as no execution could be put in force; thence it was inferred, that all the coal must be exhausted, being the property of the company, before any execution could be issued against any member of the company. The absurdity of this proposition is so self-evident, that it requires no comment—for if the colliery could only be worked at a loss, it is quite clear it could not pay off liabilities.

MR. TAYLOR having been called upon by the chairman to offer some observations on the position of the company, and the nature of their holdings, observed, that the leasehold property referred to by the chairman had never been taken by the company, referring to that held under the Duke of Beaufort—the terms on which Col. Cameron had disposed of his rights to the colliery tract possessed by the company were two-thirds receipts of the first call of 2*l.* per share, and one-half of the proceeds arising from the second and third calls, each of 2*l.* per share, and in addition thereto one-half the profits of the company, until the sum of 150,000*l.* should have been paid up. It appeared that, out of the 20,000 shares of which the company was constituted, 8000 shares had been sold to, or taken up by, the public, and 7000 shares taken by the Cameron family; and, subsequently, as we understood, 5000 more—thus making the entire number. He (Mr. Taylor) had referred back to his original papers since the last meeting, and he had no hesitation in saying, that his opinion of the property was the same as ever, and that he was fully prepared to prove the correctness of all which had been put forth in the prospectus of the company. He admitted that he was the seller, or acted as agent in so doing, of the property, but he was fully prepared to maintain the representations then made by him. He regretted to say, that the statements put forward at the last meeting by Col. Cameron he held to be good for nothing, for he had no hesitation in stating, that he did not hold that gentleman's word worth a straw. He considered that, without a

perfect purging or cleansing of the Augean stable, no good would ever be effected. At the present moment 4000*l.* to 5000*l.* per annum was paid for management and agency, while one-fourth or one-fifth the amount would be ample; and, with reference to the cost and price obtained for coal, he would merely observe, that it was sold at 14s. 6d. per ton (if we recollect aright, it was formerly some 8s. or 10s. higher), the freight being 11s.; sundry charges, 2s.—thus leaving only 1s. 6d. for covering the cost of getting agencies, wear and tear, interest on capital, and other contingencies. It would thus be apparent that a serious loss must necessarily be sustained. As regards the London management, there was a secretary at 500*l.* a year, with many other occupations, assisted by an accountant at 150*l.*; a clerk at 60*l.*; an extra at some such like amount, with expenses of rent, stationery, and the *et ceteras*. Then, again, at the wharf they had a superintendent, paid annually 150*l.* for doing nothing; but then, it should be observed, he was a brother of one of the directors. He had a foreman at 50*l.*, who was assisted by a clerk at 60*l.* Then there was their colliery bailiff, or manager (Mr. Atkinson); he acknowledged that he went underground *once* a week—he, of course, had his assistant, or butty. He would not enter at further length into the abuses which existed, but would recommend the shareholders to attend at the meeting on Friday next, then to get rid of the old directors, to have a new direction—for those now constituting the board were mere men of straw, houseless and moneyless—at the same time, that he felt it due to state, there might be one or two exceptions. He would only further observe, that during the period he had the management of the colliery, the money to meet the wages pay had never been regularly remitted; and he had been obliged to have recourse to his own private funds, or to borrow the necessary moneys to meet the current expenditure.

From a statement which was not submitted—but which we had an opportunity of inspecting—it appeared, that Col. Cameron's interest in the undertaking may be thus set out— Deposit on 8000 shares, at 2*l.* £16,000 0 0

Of which he was entitled to two-thirds, or	£10,666	13	4
First and second calls of 2*l.* each (32,000*l.*), one-half of which to Col. Cameron's credit	16,000	0	0
Making in money	£26,666	13	4
In addition thereto, 1200 shares at 6*l.* per share paid	72,000	0	0
Together	£98,666	13	4
Leaves to be received out of profits	51,333	6	8
Purchase money	£150,000	0	0

Or, assuming 4*l.* per share to be called, we assume that 48,000*l.* would be so applied —leaving 3333*l.* 6s. 8d. as the balance receivable out of profits, irrespective of the interest of three-fifths of colliery, with all calls—or 120,000*l.* being taken as paid thereon.

Upon the question being mooted as to the parties retiring from the direction, the CHAIRMAN wished to be informed, whether Mr. Hart, one of the present board, vacated office? He held a high respect for that gentleman, and should be happy to see him re-elected.—Mr. HART begged to state, that he should be willing to retain office, if well supported, and that it was considered his services would advance the interests of the company. He considered it, however, only right towards his colleagues and himself to state that, while the opinion he entertained of the value of the property was unaltered, yet that certain statements had been made that day, which he could only attribute to want of correct information, as he felt assured there was no desire on the part of the chairman, or any one, to misrepresent facts.

The CHAIRMAN observing Mr. Strelley, one of the auditors present, would ask that gentleman why the accounts were not ready? The Joint-Stock Companies' Act required that such should be prepared at least 10 days antecedent to the general meeting. The deed also named a certain period; and it was in his perfect recollection that, at the last meeting, the chairman stated they should be prepared at least a fortnight antecedent to the next meeting, and that a full and detailed statement should be afforded of the receipts and expenditure. He was anxious to know, when the accounts were likely to be audited?—Mr. STRELLEY wished it to be clearly understood, that the blame was not attributable to him or his co-auditor. He (Mr. Strelley) had called repeatedly at the offices of the company, and had seen the secretary on the subject during the past fortnight—being anxious to have the vouchers, and to pass the accounts; but he had not succeeded in obtaining them. It was true, he had a letter yesterday, appointing this day, at 11 o'clock, to meet the directors and examine the accounts. His co-auditor was not present—and hence nothing was done. During the address of Mr. Strelley a note was handed him, stating that Mr. Cooper was at the office ready to enter into the accounts.—The CHAIRMAN again adverted to the Joint-Stock Companies' Act, which, he observed, required that the accounts should be open to the shareholders 14 days antecedent to, and a month subsequent of, any general meeting at which they might be presented. He would press on the meeting the nomination of certain gentlemen to be elected to fill the vacancies in the direction; and, having read through the list of those qualified, the following gentlemen were named who should be recommended to the shareholders, from whom, from having the greater number of votes, would be placed in the direction in the room of three retiring members, and to fill the vacancy which had arisen—it being assumed, as a matter of course, that the retiring members would not be re-elected. The names of the gentlemen selected were—Messrs. Barnham, Montefiore, E. Hart, Mandeno, Bourdon, J. Danford, W. Danford, Greenwood, S. Wood, Charles Jones, and Lund.

The CHAIRMAN strongly enforced the necessity of proxies being given by parties unable to attend the meeting of Friday next. In the course of the discussion, it appeared that the company were not bound to work the collieries: but there was an obligation to pay to Col. Cameron, or his family, 2000*l.* a year as dead rent.

A vote of thanks to the chairman having been passed, the meeting adjourned.

THE DEVON GREAT CONSOLS.

SIR,—The circumscribed nature of the metallic parts of lodes, together with that of the bunches conforming to the dip of the structure of the bounding rocks, and the influence of cross-courses, and impermeable splits (flookan and slides), have on the accumulation of minerals in lodes, are very pointedly exemplified in these great mines, and show how very essential it is to know the laws by which metalliferous deposits are governed, to ensure the success of such undertakings. It is now well established, that the occurrence of the useful metals in rocks and veins is not the effect of blind chance, but according to laws and order, as beautiful as that observed in the economy of the vegetable kingdom; but the knowledge of these laws, and to know how to apply them usefully to mining, can only be acquired by a very long experience in mines, with careful research, and note and study every phenomenon in all the variety of rocks. Any attempt at generalisation, or prediction, without these acquirements, founded on long practice, would only lead to incorrect analogies and conclusions from wrong assumptions, and thus, instead of rendering any service to the miner, would lead him astray, and, consequently, to a waste of capital.

I have been led to make the above observations in consequence of what has been said and written on the mining district of Ashburton—viz.: "that it belongs to the carboniferous series"—and also the following inference, or comparison, which has been drawn between the Ashburton district and the Devon:—"In similar schistose rocks, having the same geological characteristics, on the opposite or west side of the Dartmoor granite, some of the richest and most valuable mines known in the south-west of England are now being worked." Had the analogies been correct, or had the two districts a common bond of connection, in a mineralogical sense, the above would lead men who are guided by general laws to conclusions diametrically opposite to those intended by the author of the above report, and, therefore, shows the necessity of being guarded and well advised when making such observations, especially if their practical bearings are not sufficiently understood by the writer. The only apology that can be made for the use of the appellation "carboniferous" is the detection of a few fossils, which are characteristic of that series; but this is merely a thin superficial covering, lapping on the argillaceous rocks skirting the Dartmoor granite—and have, in fact, nothing to do with the metalliferous rocks below. Had the formation been what is understood "carboniferous," it would be unfavourable for copper, and most unpropitious for tin. However, such is not the case; it is a schorlaceous killas, and, consequently, favourable for tin; but, whether sufficiently abundant or not to pay for working, remains to be seen. With respect to the next question of the parallelism between the Ashburton and the Tavistock, it is not apparent; they are two distinct metalliferous rocks; and the high and visible mass of the Dartmoor granite does not appear to have had any influence on the dip of the bunches, as their declination is easterly on both sides; the great crystalline granitic rock can only be considered as a large nodule, between Ashburton and Tavistock, having resisted further decomposition.

I shall now enter more in detail on the nature of the great bunches of ore in the Devon Great Consols, to show that they are all cut off by north and south flookans, on the side next to the granite, and rise to the surface westward, or, in other words, they all dip to the east, and are situated on the western side of their respective slides, or cross-courses.

Wheal Maria.—The bunch of ore is cut off in this sett on the east, near Morris's shaft, and extends westward for about 100 fms., gradually rising towards the surface. Gard's shaft, 70 fms. from the above, on the west of the sett, is sunk through the lower limit of the bunch at about 35 fms.; but, in Morris's shaft, it extends downwards to the 50. Both shafts are now in barren ground; but the latter is still sinking in search of another bunch below.

Wheal Anna Maria.—The engine-shaft is sunk to the 60 fm. level, and the bunch continues to hold good. According to the appearances in the western levels, the dip is to the east—consequently, the productive part of the levels west will diminish in length as they descend. Near the shaft is a slide declining east, and all the levels driven east of which are unproductive—the mineral being completely cut off by the intersecting impermeable vein.

Wheal Fanny.—The two shafts are down to the centre of the bunch; and levels have been driven east and west, and it has been found as above—dipping eastward. There is no slide in this sett; but there are several cross-courses intersecting the country between the shafts, in the middle of the orey ground, which have disordered the lode.

Wheal Josiah.—The great and rich bunch in this sett is also declining east. The western shaft is sunk to the lower limit; but the eastern has still a great depth to get to the bottom of the bunch at that point.

The last two mines are very productive, and likely to continue to afford a permanent supply for many years; and, as the character of the deposits is well understood by the superintendent of the mines, the productive parts will be properly developed, and the unproductive avoided, as well as the points carried on for making new discoveries judiciously chosen, by which means the success of the undertaking is ensured. On the other side of the Dartmoor granite, the rocks appear to be more stanniferous, and less cupriferous than those on the west, and the tin much disseminated in the decomposed schorlaceous channels, and dipping east under the calcareous sedimentary beds of Ashburton. The structure of the country is also somewhat different, and, therefore, do not present such well-defined east and west lodes as those of the Devon Consols. However, as these mines are, like old gold washings in auriferous rocks, irregular excavations, and nearly all superficial workings, there may be veins of greater magnitude below; but little can be said without a more minute and careful examination of the metalliferous channels in depth.

I hope the present adventurers will succeed in making new and profitable discoveries, for the sake of themselves as well as for the country; but, to ensure success, and to avoid the waste of capital in unprofitable grounds, and not to be led away by appearances, which easily deceive the uninitiated, it will require the exercise of the judgment of the most experienced miners. I need not state, that a little copper, seen in a slide, or cross-joint, is very different, in a practical point of view, to that observed in an east and west lode; and an old miner, in mines in which he has been employed, knows well what to follow and what to abandon. It is not appearances like these, but the prospective result, that should govern the miner in selecting his points for carrying on works of discovery. But it should always be borne in mind, that the undefined term "promising," commonly used by our old hands, varies considerably, according to the nature of their engagement—working on tribute, and working on owner's account, makes a great difference; persons should, therefore, be guarded in the use of such expressions. Unfortunately for legitimate mining speculation, the terms "kindly" and "promising" are too commonly applied, and often improperly used; and miners have to blame themselves if their indiscretion bring them to discredit and general want of confidence, and others come forward now, and borrow such terms, and make such equally indiscriminating use of them. There are other districts, not far distant from Dartmoor granite, as favourable, if not really promising; but I have no time to dwell on them at present.—J. H.: *Tavistock, July* 19.

TO THE DIRECTORS OF THE ASTURIAN MINES.

GENTLEMEN,—In the *Mining Journal* of Saturday last, I find a notice relative to the Asturian Mines, which concludes thus:—"There is little reason to fear that the call will not be readily responded to, as it is expected no further amount will be required." Now, as the shares of this company, on which 12*l.* have been paid up, were very lately offered for sale, in 100 at a time, at *thirty shillings* each, the question of further calls, involving, as it does, the ruin of some, and loss and anxiety to all having shares, is of such vital importance that something more than a vague and passing notice, in a weekly journal, for which no authority is given, and in which nothing is affirmed, is obviously necessary. If such an important resolution has really, and *bonâ fide*, been made by the directors, I must be excused for saying, that a due consideration towards those who have paid every call would have impelled the directors to have announced it at the last general meeting—seeing that, in the short interval of time which has passed, it is by no means probable that any events of such a magnitude can have since occurred as to have produced such a determination. If such favourable circumstances have actually taken place, then a special meeting might have been called to make the above communication in such a form and manner as to leave no impression of doubt or of suspicion, which the article, or notice, above alluded to is unfortunately but too well calculated to produce. I, therefore, allow myself to hope, that the directors will, on reflection, see the propriety of distinctly and explicitly declaring what construction they wish to be given to the above notice, if the insertion of it was made with their approbation, or of absolutely disowning it, if it has been published without their authority.—REGISTERED TEN: *July* 20.

ANTIMONY AND SILVER-LEAD MINING AND SMELTING CO.

SIR,—I observed, in your Journal of Saturday last, a letter from a party in the City, who calls himself a shareholder of this mine—he commences by stating, that he finds no report of this mine in your last Journal, and that this is the only means by which he is able to obtain information respecting the undertaking. I regret that any person, much less a shareholder, should attempt, for one moment, to have published such a gross and deliberate falsehood, and not append to it his name: I can only state, that at all times, the books, accounts, and reports of this mine are opened to the inspection of the shareholders from 11 to 4 o'clock, from Monday morning till Saturday night; and the mine can, at all times, be inspected by a mining agent, or otherwise, on applying for an order at the office here. With respect to the prospects, there is little or no question on that subject; it has been reported on by some of the most eminent geologists and practical mining agents of the day—among whom are Prof. D. T. Ansted, M.A., F.R.S., and professor of geology of King's College, London; Capt. John Vivian, of Truro; Capt. John Spargo, and many others—the whole of whom, without exception, have stated most confidently, that, from present appearances, and the lodes already in sight, this mine will prove not only productive, but highly remunerative to the shareholders. I can further state that, although the company only commenced their operations in March last, there is at present a considerable pile of lead ore on the mine, which they have commenced dressing, and some tons will be sent to market in the early part of next month; there is also upwards of 20 tons of antimony ore dressed and ready to be sent off; a steam-engine is purchased, of sufficient power to put the mine down 150 fms. below adit; the shaft is in course of sinking, and the engine-house will be forthwith erected, returns regularly made, and, I have no doubt, dividends regularly paid. It is well known, that the Old Treburget Mine made large profits; the lodes of this mine are parallel with the Old Treburget lodes, with every prospect of being equally productive. This mine is situate in the adjoining valley, the stratum precisely the same, and there is no reason that the returns from the Antimony and Silver-Lead Mine should not be equally as great in every respect. Any further information that the City shareholder may require, can be had on applying at the offices of the company; or, if he should prefer appealing to your columns, I trust he will insert his name and address, if he has any—as I am assured that the shareholders of this company, without a single exception, are perfectly satisfied with the manner in which the mine is worked, and the affairs of the company conducted. It is well known that there are no sellers of shares in the market, and, consequently, they command a considerable premium.

58, *Lombard-street, July* 19. T. BARTLETT.

ASHBURTON MINES.

SIR,—I received, a few days ago, printed reports of these mines, and I have also seen an abstract of the same in your Journal; but I cannot find anything in them sufficiently clear and satisfactory to induce me to comply with the hint of a friend, recommending me to buy some shares. If there are any mines in the district worthy of the notice of public companies—be they lodes, strings, or rocks impregnated with tin ore, or, indeed, anything that would warrant an outlay of capital—why not employ a competent practical man to inspect the ground? Professor Ansted is, I have no doubt, a good lecturer on geology, but not a practical miner. Like all persons who have a regard for their reputation, and who have been led to meddle and write on things they do not thoroughly understand, he has observed a due degree of caution, so as not to compromise himself too much, in the event of unfavourable results. What is the use of such reports? Are they not always received with suspicion by all thinking men? Are there not sufficient intelligent practical men to be found in the counties of Devon and Cornwall, who may be able to make such a report, *pro* or *con.*, as would satisfy our pick and gad men? We do not require to be told, that "if squats of ore should be discovered, we are to go on, and if not, to stop." It is paying a very bad compliment to the judgment of the mining community to present them with such vague reports. If there is a desire on the part of the London capitalists to work mines, let them engage professional miners; because it requires the experience of many years *in* mines to understand so difficult and complicated subjects. I have no doubt myself, and I believe many are of the same opinion, that there are mines of tin and copper in Cornwall, and also mines of lead in Wales, not yet opened, that would, by judicious and economical working, pay well; on the other hand, there are innumerable mines—or rather, metalliferous districts—that would never pay the cost of extracting the minerals; and if incompetent persons are sent to examine them, they may report favourably on the latter, and unfavourably on the former; particularly as it often happens that the poor is very showy on the surface, and the rich, perhaps, not indicating anything of importance. I have no objection to take shares, or to assist with my mite, even to such undertaking as the inspection of all the unexplored mining districts of the United Kingdom, for the sake of our mining population, provided conscientious practical men are employed, but not otherwise. I trust, Sir, you will continue to check any improper speculations, which tend so much to injure real mining; and, on the other hand, give your usual important aid towards forwarding the interests of the latter.

Devonport, July 12. J. B.

PRACTICAL MINING.

SIR,—As the mining interest is represented through the medium of your Journal, and as you always manifest a disposition to encourage whatever is likely to add to the stock of mining knowledge, I am induced to request you will allow me a space in your valuable columns. I am led to ask this favour from having noticed a dispute between Capt. Spargo and "A Subscriber," who are both unknown to the writer—my only object, therefore, in making the following remarks, is to assist those who are in pursuit of scientific knowledge, and give an additional interest to your numerous readers. It is very seldom the case that an east and west lode heaves a north and south one, but it has occurred (though seldom); and, where I have known such to have taken place, the north and south lode had no flookan, and the east and west lode carried a strong flookan; but every mining district has its peculiarities, and the same causes do not always produce the same effects. It would, therefore, be desirable when lodes are shifted, or hove, for the reporters to give a clear statement of the direction, properties, dip or underlay of the lodes that forms such junctions, and the effect produced as to mineral. If a slide, state the run and underlay of the lode—also that of the slide, and the distance the lode may be shifted. When it is proved that an east and west lode heaves a north and south lode, let there be a minute inspection as to the properties, underlay, and the ground adjoining the lodes.—AN OLD MINER: *July* 21.

MINING IN WALES.

SIR,—Among many of the numerous readers of your valuable Journal, I have been anxiously waiting for a continuance of one of your correspondent's remarks on the mineral properties of the county of Merioneth—an exposition, through his means, having to my knowledge prevented the mad and overgrown wild speculations in that profitless mineral county, to some extent. For this I thank him; and, if he had extended his survey from Dolgelley to Dinas Mowddwy and its neighbourhood, and reported thereon, he would have conferred a greater boon on the unwary adventurer, and, perhaps, put a stop to the many bubbles that have been, for some time, carried on in that quarter, and no one benefitted by them, save the lord of the manor, and his agent. It is to be hoped that this may meet the eye of the gentleman alluded to, and thus, by his honest endeavours to serve the capitalist willing to embark his money in fair and legitimate mining, he will further take the trouble to learn the fate of the mines and quarries in that neighbourhood, where thousands of pounds have been paid as premiums for grants, and other like sums thrown away in the hopeless attempt at making discoveries for minerals and slate in that neighbourhood, and thereby prevent a recurrence of such useless waste of capital.—H. J.: *Broad-street, July* 17.

FIRE IN A COAL MINE.

SIR,—A fire occurred at the Mount Osborne Colliery, Barnsley, belonging to Messrs. Day and Twibell, on the 29th of June, under the following circumstances—viz.: William Colbridge, one of the nightmen, being at work in a pair of *isolated* dip boardgates, at about eight o'clock P.M., a fall of clay seam dirt took place, driving the gas in front of the boardgate into the flame of a candle placed between the air slit and hurrying slit, which are about 10 yards apart. After the ignition of the gas, it continued to burn at a *blower*, which the man had but a short time before cut into, and set at liberty. The fire spread so fast, that the coal itself soon ignited, but the man fortunately escaped by the engine-pit level, without sustaining any injury. A consultation was now held among the managers, as to the best mode of extinguishing the fire; and, after six hours' delay, it was determined to draw out the horses, and make up the tops or pit mouth. By thus shutting off the ventilation of the mine, and also allowing the water to accumulate, they hope either to smother the fire out by want of air, or to drown it with accumulating water. I should feel obliged if some practical men will point out what they would have done under similar circumstances.—A CONSTANT READER: *Barnsley, July* 20.

WANTED—A WINDING PUMPING-ENGINE, with PUMPS, complete, from 30 to 40-horse power: or, a WINDING-ENGINE, of the same power, in first-rate condition.—Parties applying, are requested to send a sketch of the engine, size of the pumps, and all other particulars—stating the lowest terms, if bought on the premises; and the same, if delivered at Plymouth.—Address "C. E.," 2, Prospect-place, West Hoe, Plymouth. 45

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

KITT HILL.—The proprietors are determined to prosecute the mine with spirit. The tributers are stoping east of shaft C, in the adit level, and are doing well; the stope is worth 30*l.* per fm., and in the back stope the lode is 1 foot wide, worth 20*l.* per fm. The last parcel of tin sold brought 45*l.* per ton; but, having such a rich bunch now, I expect it will bring 50*l.* at the least. Stones of tin, from 20 to 30 lbs. weight, may be seen at the mine, and of such a quality as to defy competition. The next parcel of tin from this mine will be sampled, &c., the first week in August.

TRENANCE.—We understand operations are being carried on here with increased spirit. The recent extraordinary discoveries have filled the adventurers with great expectations, and we shall be glad to see them realised. We have been favoured with a view of some specimens, just arrived in town; they are of exceeding richness, and great weight—one of malleable copper, being 1568 lbs., and which is part of a slab about 30 ft. long, 4 ft. wide, and 6 in. thick—a wonderful production, which, being broken at the depth of only 14 fms., forces on us the conviction, that it is, by volcanic agency, the offspring of a highly mineralised lode, which will be met with at a deeper level. A fine stone of grey ore (of high per centage), weighing 150 lbs., and several of good quality yellow ore, add greatly to this belief. The further progress of this mine will be watched with considerable interest by the scientific, as to the fact, that it is the produce of the serpentine formation of rock, heretofore supposed to be unproductive of mineral riches, and which formation, in England, is only known to exist (in a body) in the vicinity of the Lizard Point. These specimens we have seen through the urbanity of the directors, who, we have no doubt, will readily manifest similar politeness to any gentleman conversant with mineralogy, or desirous of viewing them—as we think we can assert, without fear of contradiction, that superior varieties cannot be found in any collection of minerals in Europe, and which should certainly take a place in the British Museum, more particularly from their being raised from a British mine.

WHEAL TRELAWNY.—I have just time to inform you, that it is very likely they have the main part of the lode, in the cross-cut, at Smith's shaft; it is down nearly perpendicular, and worth about 5*l.* per fathom, and is much the same sort of lode as they have had in the level further south. They have good ground in the cross-cut, and shall drive some fathoms further west, to prove whether there is any part of lode still in that direction. The lode in the winze is still looking well, and the water going down in the shaft—the other parts of the mine looking much the same as reported. I went down in Trehane, and found good ground in the 45 north, the lode worth about ½ ton per fm.; there are about 30 fms. more for this level to be driven before they come to the boundary. The bottom ends are worth about 9*l.* per fm. each, and ground much better than it was in the 45.

FOREIGN COPPER ORE.—The following returns have been ordered by the House of Commons, on the motion of Mr. Wyld:—"Return of the total quantities of foreign copper ore which paid duty in the United Kingdom, in the present year, 1848, to the 17th day of April inclusive; specifying the quantity of metallic copper contained in such ore upon which the duty was charged, and the total amount of such duty:"—"Similar return from the 18th day of April to the 5th day of June, 1848, both inclusive:"—"And, similar return from the 6th day of June to the 5th day of July, 1848, both inclusive."

SOUTH AUSTRALIA.—We have received Adelaide papers to the 20th of Feb. They contain the customs returns for the fourth quarter of 1847. The total imports at Port Adelaide during that quarter are valued at 106,316*l.*; the exports of colonial produce at 103,926*l.*; and the imports re-exported at 10,897*l.* The most important articles of export, the produce of the colony, are—Copper ore, 3855 tons, valued at 67,585*l.*; wool, 514,957 lbs., valued at 26,667*l.*; wheat, 1043 quarters, valued at 215*l.*; and flour, 316 tons, valued at 3708*l.*

SOUTH WHEAL BETSEY.—A special general meeting of shareholders was held at the Half Moon Hotel, Exeter, on Tuesday, the 18th inst.—J. LANG, Esq., M.D., in the chair—but the official report and statement of accounts not having been received, we are obliged to postpone our report until they reach us.

WEST WHEAL TREASURY.—At a two-monthly meeting of adventurers, held at the mine, on the 17th inst., the accounts were examined and passed, showing—Ores sold (less dues), 1046*l.* 15s. 1d.—By labour cost for May and June, 584*l.* 11s. 1d.; merchants' bills, 439*l.* 3s. 8d.: leaving balance, 23*l.* 0s. 4d.

ACCIDENTS.

New Kelloe.—As E. Jones was proceeding to the workings with his tub, another putter, coming from the opposite direction, and not observing him, they got into collision, when he was jammed against the roof of the mine, and killed.

Murton Colliery.—G. Thompson was killed by a quantity of steam and hot-water being blown upon him from a valve in the boiler.

Kingswinford.—L. Cole, "a doggy," was, unfortunately, killed by a fall of coal at a colliery at Netherton.

Boscawell Downs Mine, St. Just.—R. Jelbart, in unhanging the whim chain, which was suspended to a crook in the side of the shaft, was overbalanced by the weight, when he fell about 14 fathoms, and was killed.

Rowley.—T. Jinks was sadly burned by an explosion at the British Iron Company's New Lion Colliery.

Dudley.—J. Richards was severely injured by a fall of coal at Messrs. Cochrane & Co.'s pits, worked by Messrs. Timmins and Pearson, at Hart's Hill.—A man and boy, named W. Porter and J. Allen, were injured by an explosion of sulphur, while employed in a pit of Messrs. Hunt and Brown, worked by Mr. T. Greenway, at Bromley. The boy is very much injured, and the man is also severely burned about the arms and shoulders.

Bilston.—As S. Linney was working in the hollows of a colliery, at Buncker's Hill, a quantity of coal fell, and killed him.

Stray Park Mine.—Sampson Eva, while tamping a hole for blasting, was seriously injured by its sudden explosion.

STRIKE OF WORKMEN AT BLAENAVON, GARNDDYRRYS, AND PWLLDU.—That portion of the "hills" extending from Garnddyrrys, on the side of the Blawrenge, as far as Blaenavon, has for some months past been the scene of great distress, arising from the prostration of trade; and this depression has issued in one of those unhappy results of which the history of the iron trade in South Wales is so rife. The strike against a reduction of wages was commenced by the firemen engaged at Blaenavon, who, for many months past, have been earning 1*l.* 16s. per week. On Thursday last, the Garnddyrrys and Pwlldu workmen followed their example. The furnace has been blown out, the forge has been stopped, and the whole district is a scene of desolation. The general pressure of the times is severely felt by the tradesmen of Pontypool, Abergavenny, Tredegar, &c.; and this unhappy event will aggravate the present state of things.

WINDSOR AND SOUTH-WESTERN.—The Windsor branch, from Richmond to Datchet, is expected to be opened for passenger traffic on Friday next. The first locomotive engine, with the Government Inspector, will arrive at the Datchet terminus this day (Saturday). It is stated that a return ticket, to and from Datchet and the York-road station, will be only 2s. 4d.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 9 per Cent., 200 198	Belgian, 4½ per Cent., 71
3 per Cent. Reduced Ann., 87⅞ ¾	Dutch, 2½ per Cent., 45¾ ⅛
3 per Cent. Consols Ann., 87⅞ ⅛	Brazilian, 5 per Cent., 71
3¼ per Cent. Ann., 88¾ 7⅞	Chilian, 3 per Cent., 43
Long Annuities, 9	Mexican 5 per Cent., 17¼ 17
India Stock, 10½ per Cent., 238 40	Russian, 5 per Cent., 100
3 per Cent. Consols for Acct, 87⅞ ⅛	Spanish, 5 per Cent, 12¼
Exchequer Bills, 1000*l.* 2d. 44 42 pm.	Ditto 3 per Cent., 21¼

Mines.—The mining share market continues in much the same position as represented last week; nor can we anticipate any decided improvement whilst the standard remains so low.

The inquiries made for shares in leading mines are generally much under sellers' quotations—with the exception of South Basset and South Wheal Francis, which maintain our present quotations. In these mines, as well as South Wheal Tolgus, we have been informed, by private letters, that improvements have been made.

The directors of Devon Great Consols declared (on Wednesday) a dividend of 5*l.* per 1024th share, for the past two months—reserving a balance of about 12,000*l.*, with copper ore bills coming due.

The adventurers in North Roskear held their two-monthly meeting on Tuesday, when a dividend of 7*l.* per share was declared. The mine is represented to be in a most flourishing condition.

The meetings of Cameron's Coalbrook Steam Coal and Swansea and Loughor Railway Company are fully reported in another column; also the last half-yearly meeting of the Mining Company of Ireland—both of which are particularly worth the attention of all parties interested.

The following shares have been sold during the week—viz.: Devon Great Consols, South Wheal Basset, South Wh. Francis, Bedford United, Trehane, Wheal Mary Ann, Herodsfoot, Carwinning Hill, Tamar, Gonamena, Tincroft, Stray Park, Pennant, Camborne Consols, Tregorden, West Wheal Treasury, West Tolgus, Callington, East Tamar, &c. &c.

Wheal Trelawny account meeting for March, April, and May, was held on Tuesday, the 18th inst.; when the statement of accounts presented showed a balance of 94*l.* 9s. 10d. in favour of the adventurers. The lead ores sold in April, May, and June, realised 3640*l.* 17s. 8d., exclusive of a parcel sold on Monday last, computed at 90 tons, at 13*l.* 13s. per ton.

By letters received this morning, we are advised of an important discovery in a cross-cut extending in the north mine.

Wheal Mary Ann adventurers held their bi-monthly account on Wednesday last: the report shows a profit on the workings for the months of April and May of 61*l.* 8s. 6d. A sale of lead ores in June realised 1051*l.*, and the next parcel of 60 tons will be ready for sampling by the 4th Aug.

Trehane two-monthly account was held on Thursday, but we have not been advised of the result, but presume the dividend will not be less than 25s. per 256th share.

We learn, with much satisfaction, that the list of shareholders for working the South Tamar Mine is completed, and that the most effective operations will be immediately commenced, under the energetic supervision of the manager and directors of the East Tamar Mines, whose prospects are also assuming a most gratifying position.

We referred, a short time since, to the proposed formation of a new smelting company, which is now about being brought before the public; and, from the influential names thus identifying themselves as being opposed to the principles of a great monopoly, for the purpose of preserving the mining interest from total ruin, we feel assured that a ready co-operation will be found among the mining community generally. We hail this movement with gratification, and trust the parties will meet with the encouragement which their laudable exertions merit. The particulars of the prospectus we will furnish, as soon as provisionally registered.

We have seen some extraordinary and beautiful specimens of rich malleable copper and grey ore from the Trenance Mines, in the parish of Mullion, Cornwall, recently taken from the lode at about 14 fms. from the surface, and received in town on Saturday last. One slab of malleable copper weighs 1568 lbs., and is 7½ ft. in length, varying from 2 to 3 ft. in width, and from 4 to 8 in. in thickness, and is a portion of a piece of the unprecedented length of 30 ft. We look upon this production of Nature as an excellent subject matter for the disciples of Hutton and Werner to discuss the principles of their respective and opposite doctrines—for we here conceive these mineralogists at fault.

We learn that the unprecedented fall in the price of copper will affect, in various ways, some of our trades; at the same time, however, that the reduction took place, stocks do not appear to have been large. This we understand to have been the case with large manufacturers in London, and other provincial towns—consequently, we may expect a revival in the copper trade shortly, more especially as we find that an increased demand for manufactured articles has taken place both for home and foreign consumption.

We stated, last week, that a fall on copper, of 10*l.* per ton, had taken place. It should have been 10 per cent., or 9*l.* per ton.

In the foreign share market, we find that but little business has been transacted, and that confined to a few United Mexicans, Del Montes, Bolanos, St. John del Reys, and Asturians.

By letters regularly received from the agents, we learn that the smelting department of the Asturian Mining Company is progressing in a satisfactory manner; whilst the operations at the mines are equally gratifying.

Railways.—On Monday there was no very large amount of business done in railway shares, but prices were well supported. In the early part of Tuesday, prices were on the advance, and things looked brighter; on Wednesday, however, a considerable decline took place in the amount of business done, without affecting prices in an equal degree, although there was a decline in some descriptions. On Thursday the market remained heavy, with a trifling further decline, and left off yesterday without having experienced any material improvement.

Meetings.—*Caledonian:* A proposal of the directors to issue preference stock, to the amount of 750,000*l.*, at 7 per cent. for 5 years, and 6 per cent. in perpetuity, was carried by a majority of 30 to 13.—*Derby, Uttoxeter, and Stafford:* A resolution was passed, to return 7s. 4d. per share, and to retain 250*l.*, for a testimonial of the good conduct of the directors.—*Chester and Holyhead:* The bill securing to the company the privilege of conveying passengers and goods in their own steam-boats has passed, and gives them the power of thus carrying them throughout from Chester to Dublin.—*Ceylon:* At the second general meeting, a correspondence with Mr. B. Hawes was read, in which, on the part of Earl Grey, he refuses a guarantee of 5*l.* per cent. on the capital. A call of 5s. per share was recommended, but the meeting ultimately adjourned to the 3d August, to determine the amount.—*Sambre and Meuse:* The report stated, that the committee blamed the directors for advancing sums to the contractors, without taking proper securities, and for not looking more narrowly into the expenditure. Strong marks of discontent were expressed against Mr. Cubitt, the resident director in Belgium, who, it is understood, will resign. Four directors were to retire: three new ones were nominated at the meeting, and the fourth was left to the selection of the directors. The meeting was adjourned to Wednesday next.

The following arrivals of specie have taken place since our last:—At Southampton, on Saturday, the Peninsular and Oriental Steam Navigation Company's ship, *Jupiter*, arrived with 29 packages of specie.—At Liverpool, on Wednesday, from New York, the *Britannia*, having on freight about 3000*l.* in specie.—In the Docks, the steam ship *Camilla*, from St. Petersburgh and Copenhagen respectively, has brought two chests of bullion from the former, and one case of gold coin from the Danish capital. The ship *Sutlej*, from Madras, has brought nine boxes of specie. The steam-ship *Columbine*, from Havre, has brought two packages of sovereigns, addressed to a firm of commercial eminence in the City.

HULL, Thursday.—The fine weather has improved the share market, which shows more firmness than for some time past.

Edinburgh and Northern Railway—Opening to Perth.—On Thursday, the Government Inspector went over the unopened portion of this line, from Abernethy-road, near Newburgh, to the junction with the Scottish Central, near Perth, and expressed himself highly satisfied with the substantial nature of the works. The line was in consequence opened throughout on Tuesday, when the mail reached Perth an hour sooner than formerly.

Liverpool, Crosby, and Southport Railway.—That portion of the above line, which lies between Waterloo and Southport, a distance of about 13 miles, was formally opened yesterday by the directors. Southport is a favorite watering-place, about 17 miles from Liverpool, and the passenger traffic, during the summer season especially, may be expected to be very great. The line, a single one, has been so far constructed in the short space of three months, and without any further demand upon the shareholders than the first call of 2*l.* per share. The Government Inspector is to traverse the line today, and should his report be favourable, the line will be opened for public traffic on Monday next.

London and North-Western Railway.—Those of our readers who study the weekly traffic tables will have remarked, that there has been an apparent falling off in that of the London and North-Western Company for the last six months, to the extent of some 6000*l.* or 7000*l.*, as compared with last year. We are happy to learn, however, that there is a real increase over last year of more than 10,000*l.*, the difference being accounted for by the mode of keeping the merchandise returns. It is also rumoured that there is to be a large reduction of expenses during the half-year, and that the net profit will consequently be much greater than in any preceding six months.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending July 15, was 13,887; amount of money, £57 17s. 3d.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	—
512	Albert Consols	1	2¼
1024	Alfred Consols	4½	5
235	Andrew and Nangiles	28½	5
1000	Antimony and Silver-Lead Mining & Smelting	5	6½-7
1024	Ashburton United Mines	7¾	10
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	6	6½
1000	Barristown	4½	1
4000	Bedford	2½	2
1244	Birch Tor Tin Mine	9¼	2½
8000	Blaenavon	50	17½
100	Botallack	175	60
120	Brewer	5	7
10000	British Iron, New, regis.	10	13
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	35
128	Callestock	17	30
1000	Callington	19	20
1000	Camborne Consols	5	6½
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	2
256	Caradon Mines	22½	10
256	Caradon United	24	2½
256	Caradon Wh. Hooper	21	10
1000	Carn Brea	15	90
3000	Carthew Consols	1½	6
2048	Cascade	1	2
112	Charlestown	220	60
512	Coatlithe Hill	½	1
500	Comblawn	5½	6
128	Comfort	45	50
256	Condurrow	20	28
2560	Cook's Kitchen	14	2
1000	Coombe Valley Quarry	3	4
6500	Cornish Mining Co.	2	2¾-½
1000	Copper Bottom	1½	6½
1024	Cosheen	4½	20
225	Craddock Moor	16½	5
128	Creeg Braws	120	100
500	Cubert Mine	12½	10
1000	Cwm Erfin	3½	3½
300	D. Prior & Buckfastleigh	14	26
7100	Derwent	8½	5
1024	Devon & Courtenay Con.	7¾	1½
1024	Devon Great Consols	1	210
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12½
512	East Alvenney	5½	12½
112	East Caradon	47	47
2048	East Crowndale	5½	3
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	7
100	East Relistian	22	40
9000	East Tamar Consols	⅛	1
—	East Wheal Albert	1	3
94	East Wheal Crofty	125	280
1024	East Wheal Fortune	2	3
1024	East Wheal Friendship	3	3½
128	East Wheal Rose	50	850
—	East of Scotland Iron Co.	2½	1½
123	East Wheal Seton	14	10
256	Elborough	1½	2
256	Exmoor Wh. Eliza	4	6
512	Fowey Consols	40	45
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	9½
4000	Gen. Mining Co. for Irel.	1½	1½
2048	Georgia Tin Mines	1½	1¾
2048	Goldscope Mine	2	2
256	Gonamena	34	35
128	Goonvrea	4	1½
100	Great Consols	1000	400
2560	Great Michell Consols	1½	2
256	Great Resugga Moor	11	6
512	Gt. Wh. Rough Tor Con.	15½	20
100	Grogwinion	5	—
256	Gwinear Consols	7	3½
6000	Heigaston Down Con.	½	2½
256	Herodsfoot	18	28½
10000	Hibernian	12½	1¾
239	Hobb's Hill	6	3
1000	Holmbush	19	5-4
827	Kirkcudbrightshire	5¾	2
2048	Lamherooe Wh. Maria	11	4
128	Lelant Consols	90	60
160	Levant	—	80
1000	Lewis	15	6½
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	15	15
6000	Marke Valley	10	2
5000	Mendip Hills	2½	⅝
5000	Merionethshire Slate & Slate Slab Co.	1½	2
128	Metha	34	133
20000	Mining Co. of Ireland	7	3½
256	New East Crowndale	3¾	3¾
128	North Fowey Consols	37	37
100	North Pool	45	350
140	North Roskear	5½	155
256	North Wh. Abraham	1	1
262	North Wh. Leisure	1½	2
15000	Northern Coal Co.	23	2
128	Par Consols	—	1000
1000	Pennant	1½	1
100	Penrhiw	30	65
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	10
512	Plymouth Wh. Yeoland	6½	23
256	Polsaith Consols	4½	7
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
3072	South Callington Mine	2	1
128	South Caradon	10	400

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
1100	South Dolcoath	4	4
256	Sth. Friendsh. Wh. Ann	20	4
200	South Harvannah	10	25
256	South Molton	5	8
256	South Tolgus	10	30
256	South Trelawny	20	12
128	South Wheal Basset	110	105
256	South Wh. Betsey	2½	12½
124	South Wh. Frances	160	185
1000	South Wh. Maria	2½	1½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	15
9600	Tamar Consols	3	5⅝
1024	Tavy Consols	4	8
6000	Tincroft	7	5⅝
1000	Tin Vale	2⅝	4½
128	Tokenbury	152½	10
256	Tollpetherwin	3½	5
256	Tregordan	½	5
256	Trehane	2¼	25
5000	Treleigh Consols	6	2½
2000	Trenance	3	16-18
96	Tresavean	10	210
120	Tretheilan	5	15
120	Treviskey and Barrier	130	90
268	Treveau	1½	5
100	United Mines	300	350
256	Wellington Mines	15	10
128	West Basset	45	10
256	West Caradon	20	100
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Providence	9	12
200	West Seton	40	160
—	West of Scotland Iron Co.	210	210
120	West Tretheilan	5	30
256	West United Hills	—	4
512	West Wheal Frances	1⅜	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	11	1½
2560	West Wh. Maria	3	1
256	West Wheal Tolgus	21½	7
256	West Wheal Treasury	19	8
5200	Wicklow Copper	5	10½-⅝
184	Wheal Adams	51	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
256	Wheal Allen	2	5
240	Wheal Anderton	23	27
128	Wheal Ann	—	50½
512	Wheal Anna Maria	4½	5⅝
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	4-5
256	Wheal Benny	12½	7
256	Wheal Blencowe	21	5
256	Wheal Bucketts	20	5
256	Wheal Calstock	5	10
136	Wheal Clifford	190	50
1024	Wheal Coad	½	5
268	Wheal Courtenay	12½	15
6000	Wheal Curtis	3	⅜
256	Wheal Fortescue	6½	5
388	Wheal Franco	27	20
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
—	Wheal Lawrence	—	3½
256	Wheal Louisa	8½	8
112	Wheal Margaret	79	250
512	Wheal Mary Ann	5	14½
237	Wheal Mary Consols	42½	5
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	15
99	Wheal Seton	214	700
194	Wheal Sisters	32½	12
512	Wheal Sophia	3½	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
550	Wheal Trescoll	2	10
260	Wheal Trelawny	7½	60
256	Wh. Tremaine (St. Ervan)	4½	1½
1024	Wheal Tremayne	35	1¼
92	Wheal Tryphena	140	265
242	Wheal Venland	29¾	30
256	Wheal Vlow (Perranz.)	½	⅜
184	Wheal Vyvyan	—	60
256	Wheal Williams	6	8
1024	Whiddon Mines	4¾	4¾

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	2½-3
15000	Asturian Mining Co.	12	1¾
20000	Australian	2	1¾
10000	Anglo-Mexican Co.	100	2
12374	Ditto Subscription	25	2¼
6000	Barossa Range	½	1¼
3000	Bolanos	150	3
2000	Ditto Scrip	15	3
12000	Brazilian Imperial	23	3
10000	Cobre Copper Co.	40	15
10000	Copiapo Mining Co.	14	2½
10000	General Mining Ass'n.	20	11½-12
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	8	½
5000	Mocaubas & Cocaes	30	6
100000	N. Brit. Australasian	1	½
29320	Rl. del Monte, regis. / Ditto unregistered	28¾	⅜-⅝
	Ditto Red Debentures	—	4
	Ditto Black ditto	—	3
	Ditto Loan Notes	150	26
7000	Royal Santiago	10	5
11000	St. John del Rey	15	7½
43174	United Mexican	Av. 28½	3½

SOUTH AUSTRALIAN SHARE MARKET—Feb. 23.

Company.	No. of Shares.	Capital.	Paid-up.	Present Price.
Burra Burra	2464	£12,320	£12,320	£156 0
Princess Royal	400	20,000	16,000	50 0
Adelaide	2000	10,000	10,000	3 12
North Kapunda	436	21,800	21,000	15 0
Royal Mining Company	10000	100,000	10s. p. sh.	0 15
Greenock Creek	300	1,000	1,000	6 0
Montacute	100	5,500	5,500	55 0
Wakefield	500	1,000	£1,000	1 0
Paringa property, per acre				4 5

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns. 1848	1847
Birkenhead, Lancashire, & Chesh.	15	997,284	37	5 *p. c.**	946	830
Caledonian	130	3,594,470	27¾	—	4581	—
Chester and Holyhead	59½	2,871,470	27½	—	1153	—
Dublin and Drogheda	35	754,529	23½	—	—	1017
Dublin and Kingstown	7⅞	473,282	—	6	1187	1252
Dundee, Perth, & Aberdeen Junc.	47	415,073	26	8	1205	1000
East Anglian (Lynn to Ely)	55½	1,062,742	6½	—	629	—
East Lancashire	26	1,733,915	17¾	—	1131	938
Eastern Counties and Norfolk	295	9,833,859	15	4	16359	14140
Eastern Union	51½	979,926	20	-	1361	1234
Edinburgh and Glasgow	53	2,481,767	40	--	3924	3454
Edinburgh and Northern	29	1,392,092	17½	4*	1726	—
Glasgow, Paisley, and Ayr	64½	2,097,321	72½	6	2759	2766
Glasgow, Paisley, & Greenock	23	845,554	15	4	1464	1271
Gt. Southern & Western, Ireland	110½	1,809,787	27	4*	3130	1649
Great Western	281¼	10,970,636	88½	7	21874	21168
Kendal and Windermere	10½	169,888	23	—	204	213
Lancaster and Carlisle	70	1,395,193	54	4	2205	1364
Lancashire and Yorkshire	136¾	7,597,618	86	7	11764	10269
London and North Western	428	21,513,354	126	8	45602	46471
London and Blackwall	4	1,241,061	4⅝	1¾	1599	1454
London, Brighton, & South Coast	161½	6,087,822	31¾	4	10711	9495
London and South-Western	189	6,264,164	47½	8	11682	10374
Londonderry and Enniskillen	14½	145,135	16	—	143	133
Manchester, Sheffield, & Lincolnsh.	62	2,336,624	60	5	2844	2231
Maryport and Carlisle	28	440,851	40	—	652	602
Midland Company	422½	9,853,122	103¼	7	23092	20522
Midland Great Western (Irish)	36½	725,332	10½	4*	1022	—
Newcastle and Carlisle	66½	1,407,375	110	6	2236	2188
North British	81	2,800,748	22¾	5	2355	1984
Scottish Central	33	——	23	—	1000	—
Shrewsbury and Chester	17	780,272	15	—	688	390
South Devon	50½	1,609,071	17	—	1705	815
South-Eastern	165½	6,932,181	25½	6½	10120	9860
Taff Vale	38	820,056	126	5½	1789	1629
Ulster	36	684,684	52	4½	894	854
Whitehaven Junction	12	147,095	7	4½	197	222
York, Newcastle, & Berwick	242½	4,466,526	32¾	9	14167	9640
York and North Midland	230½	3,799,297	68	10	12179	7954

LATEST CURRENT PRICES OF METALS.

LONDON, JULY 21, 1848.

	£ s. £ s. d.		£ s. £ s. d.
Iron—Bar *a*..Wales..*ton*	5 15— 6 0 0	Copper—Ord. bottoms ..	0 0— 0 0 10
,, ..London ..	0 0— 6 15 0	Yellow Metal Sheathing	0 0— 0 0 7½
Nail rods ,,	0 0— 7 15 0	Tin—Com. blocks *g*..*cwt.*	0 0— 3 15 0
Hoop (Staf.) ,,	0 0— 8 15 0	,, bars	0 0— 3 16 0
Sheet ,, ,,	0 0— 9 15 0	Refined	0 0— 3 18 0
Bars ,, ,,	0 0— 8 10 0	Straits *h*	0 0— 3 14 0
Welsh cold-blast foundry pig ..	3 10— 4 5 0	Banca	0 0— 4 0 0
Scotch pig *b*, Clyde	0 0— 2 6 6	Tin-Plates—Ch., IC *i*, *box*	1 8— 1 10 0
Rails, average	0 0— 6 0 0	,, IX	1 14— 1 16 0
Chairs	0 0— 4 0 0	Coke, IC	1 5— 1 6 0
Russian, CCND *c*..	0 0—17 0 0	,, IX	1 11— 1 12 0
,, PSI	0 0— ——	Lead—Sheet *k* ......*ton*	0 0—17 0 0
,, Gourieff	0 0— ——	Pig, refined	0 0—18 0 0
,, Archangel	0 0—13 0 0	,, common	16 0—16 10 0
Swedish *d*, on the spot	0 0—11 5 0	,, Spanish, in bd.	0 0—16 10 0
,, Steel, fagt.	0 0—15 0 0	Red	0 0—18 10 0
,, ,, kegs *e*	0 0—13 10 0	Dry White	0 0—23 0 0
Copper—Tile *f*	0 0—78 10 0	Shot (Patent)	0 0—19 10 0
Tough cake	0 0—79 10 0	Spelter—(Cake) *l* on spot	13 10—13 15 0
Best selected	0 0..82 10 0	,, for arrival	0 0— —
Ordin. sheets, *lb.*	0 0— 0 0 9	Zinc—(Sheet) *m* export.	20 0—21 0 0
		Quicksilver *n* ......*lb.*	0 0— 0 3 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent.

[FROM OUR CORRESPONDENTS.]

We have nothing to mention worthy of notice in the metal market this week; prices and demand remaining as stated in last week's *Mining Journal.*

All descriptions of manufactured iron have been in good demand at the late reduction.—Welsh bars are firm at our quotation.—Several sellers of Scotch pig-iron have appeared in this market during the past week, at 46s.; not the least disposition, however, has been evinced to operate in this article—buyers confidently expecting lower rates.—In other metals, no alteration.

GLASGOW PIG-IRON TRADE, July 20.—The improved feeling which existed in this trade last week has not been sustained. The increase of price made sellers numerous, and we are now experiencing a corresponding reaction. The market closed heavily today, and the price of mixed Nos. may be quoted at 45s. to 45s. 6d.—cash.

MINERAL AND METALLIC EXPORTS.—The following particulars are from the declared values of the principal articles of produce and manufacture, exported in the first five months of 1846, 1847, and 1848:—

	1846.	1847.	1848.
Coals and culm	£387,707	£353,406	£430,191
Earthenware	345,318	362,096	312,845
Glass	109,760	131,739	103,911
Hardware and cutlery	898,232	921,595	773,647
Machinery	450,764	408,816	305,396
Iron and steel	1,807,404	2,015,515	2,081,304
Copper and brass	597,638	752,962	443,562
Lead	60,897	89,106	45,764
Tin, unwrought	25,074	62,157	56,484
Tin-plates	309,257	197,102	217,475
Salt	80,052	118,703	90,332

LEAD ORES.

Sold at Holywell.

Mines.	Tons.	Price.	Purchasers.
Tarlargoch	97	£9 0 0	Mather & Co.
ditto	32	9 8 0	J. P. Eyton.
ditto	16	9 8 0	ditto
Milwr	5	9 8 0	Newton, Keates, & Co.
ditto	5	9 8 0	Mather & Co.
Hendre	60	8 15 0	Newton, Keates, & Co.
Fronfownog	100	9 9 0	Mather & Co.
ditto	100	9 8 0	Walker, Parker, & Co.
Deep Level	57	8 18 0	Mather & Co.
Cairnsmore	30	8 17 6	Walker, Parker, & Co.
Prussia	112	8 10 6	ditto
Conlig	40	9 0 0	ditto
Brinbellcan	5	6 6 0	Newton, Keates, & Co.
Total tons	659.		

Sold at Liskeard.

Mines.	Tons.	Price.	Purchasers.
Herodsfoot	75	£11 2 0	Walker, Parker, & Co.
Trelawny	90	13 13 0	ditto
Total tons	116.		

Sold at the Mine.

Mines.	Tons.	Price.	Purchasers.
East Wheal Rose	72	£12 1 0	R. Michell & Son.
ditto	29	9 18 0	Tamar Company.
Llanfair	40	22 10 0	Newton, Keates, & Co.
Total tons	141.		

Sold at Aberystwith.

Mines.	Tons.	Price.	Purchasers.
Goginan	42	£13 2 6	Newton, Keates, & Co.
ditto	63	13 4 6	Walker, Parker, & Co.
Frongoch	80	8 17 0	ditto
Graigoch	30	8 10 6	Tamar Company.
Penpemfren	20	9 10 6	Newton, Keates, & Co.
Total tons	235.		

COPPER ORES.

Sampled July 5, and Sold at Pearce's Hotel, Truro, July 20, 1848.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Cons. Wh. Josiah	131	£5 14 0	West Caradon	36	£2 17 0
ditto	129	5 2 0	ditto	53	8 3 0
ditto	100	4 1 0	ditto	20	7 19 6
ditto	84	4 16 0	Wh. Friendship	109	7 6 6
ditto	37	5 10 0	ditto	106	6 17 0
Wh. Fanny	132	4 5 0	ditto	57	2 10 0
ditto	119	4 10 0	Fowey Consols	106	4 12 0
ditto	99	3 5 0	ditto	99	6 3 0
ditto	71	3 16 6	Poldice	67	3 14 6
ditto	69	4 5 0	ditto	42	3 17 6
ditto	66	3 16 6	ditto	38	3 17 6
Wh. Maria	116	3 19 0	ditto	20	5 16 6
ditto	88	6 11 0	Bedford Mines	105	4 18 0
ditto	23	3 9 6	Wh. Jewel	56	2 19 6
Wh. Anna Maria	65	4 3 6	South Wh. Fortune	36	4 1 0
ditto	54	4 0 6	ditto	19	6 16 6
West Caradon	97	6 3 0	Wh. Williams	41	4 2 6
ditto	93	6 4 0	Wh. Maiden	33	3 0 6
ditto	60	6 8 0	East Crowndale	22	3 0 6
			Ashburton United	12	5 19 6

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Devon Gt. Cons. Wh. Josiah, Wh. Maria, Wh. Fanny, Wh. Anna Maria	1383	£6255 1 6	Poldice	167	£676 1 6
			Bedford United	105	514 10 0
			Wh. Jewel	56	166 12 0
			South Wh. Fortune	55	275 9 6
			Wh. Williams	41	169 2 6
West Caradon	359	2251 4 0	Wh. Maiden	33	99 16 6
Wh. Friendship	272	1667 0 6	East Crowndale	22	66 11 0
Fowey Consols	205	1096 9 0	Ashburton United	12	71 14 0

Average Standard .... £78 8 0 | Average Produce 9⅝

Average Price per ton £4 18 0

Quantity of Ore .... 2710 tons. | Quantity of Fine Copper, 264 tons 14 cwts.

Amount of Money £13,309 12 0

LAST SALE.—Average Standard .... £80 2 0.—Average Produce 9¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	148	£549 4 0
Vivian and Sons	676½	3537 0 3
Freeman and Co.	316	1600 5 0
P. Grenfell and Sons	196	768 4 0
Sims, Willyams, and Co.	446	2304 1 0
Williams, Foster, and Co.	927½	4550 17 9
Total tons	2710	£13,309 12 0

Copper ores for sale on Thursday next, at Pearce's Hotel, Truro.—Mines and Parcels.—Consols Mines 834—United Mines 688—Tresavean 453—Perran St. George 430—Treviskey 315—Par Consols 300—South Caradon 250—Trethellan 173—Wheal Comfort 145—Grambler and St. Aubyn 144—Treleigh Consols 115—Wheal Ellen and Wheal Music 112—Wheal Mary Consols 111—Barrier 89—Wheal Andrew and Nangiles 86—Wheal Clifford 69—Wheal Prudence 57—South Tolgus 43—Wheal Sisters 40—Wheal Henry 36—Wheal Vyvyan 26—Ting Tang Consols 23.—Total, 4539 tons.

Copper ores for sale on Thursday week, at Tyack's Hotel, Camborne.—Mines and Parcels.—North Pool 900—Wheal Seton 569—Camborne Vean 513—East Wheal Crofty 448—Tincroft 290—South Wheal Basset 285—Condurrow 242—Fowey Consols 240—East Pool 209—Dolcoath 199—South Wheal Frances 168—Wheal Bucketts 78—Wheal Mary 43—Total quantity of ore to be sold, 4184 tons.

COPPER ORES.

The following are the purchasers at the Swansea sale of the 13th inst.:—

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Freeman and Co.	71	£791 13 0
Grenfell and Sons	303	3038 18 0
Sims, Neville, and Co.	224	3645 9 8
Vivian and Sons	468	4258 11 0
Williams, Foster, and Co.	686	[illegible]
Schneider and Co.	21	382 6 [illegible]
B. Smith	41	[illegible] 16 [illegible]
Total tons	1787	[illegible],765 10 [illegible]

Copper ores for sale July 27.—Cobre 135, ditto 121, ditto 103, ditto 91, ditto 62, ditto 124, ditto 98, ditto 85, ditto 60, ditto 51, ditto 15.—Cuba 130, ditto 126, ditto 60, ditto [illegible], ditto 56, ditto 116, ditto 87, ditto 68, ditto 121.—Recompense [illegible], ditto 100, ditto [illegible], ditto 86, ditto 68.—Berehaven 123, ditto 122, ditto 104.—Knockmahon 96, ditto 80, ditto 76.—Ballymurtagh 59, ditto 49.—Burra Burra 25.—New Zealand 8.—Total, 2062 tons.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JULY 22, 1848.

It is barely within the compass of a common probability, that the session of the British Association, about to be held at Swansea, can close without leaving some permanently beneficial traces behind it. The gifts which science has, in every civilised country, bestowed on the practical arts, are various and enduring; and, in a nation where science itself is cultivated—with a steady and a leading view to the every day wants, and the general conveniences of society—it is almost a necessary consequence, that the arts will be most extensively enriched with its instructions and discoveries. The arts themselves, on the other hand, promote the success and the popularity of science, by exhibiting its truths and its principles in a distinct and concrete form—in a dress, in fact, of operative working utility. Wherever they are raised up to their proper rank, and attain their just estimation, the arts are little more than Wisdom handling her instruments, and Philosophy set to work.

The peculiar character of the site chosen, in this instance, by the Association for its temporary session, is calculated, as we think, to draw out and gratify the learning and the curiosity of the assembled *savans*. As a geological area, it is, probably, not surpassed in this island, by the unique singularity of its apparently heterogenous strata, and by the material and demonstrative evidence it affords of the truth of some of the leading axioms in this department of natural history. It will be a happy circumstance, if, at this gathering of the illustrious and the learned, some humble and ardent listeners, from the caverns or the forges which girdle the place, should, from their already-acquired knowledge of some of the phenomena of Nature, be enabled to comprehend the force, and see the applicability to their own departments of labour, of some of the points unfolded in the discourses delivered at this meeting. We trust there are some minds, at least, in which the seeds of thought will be so sown and received, as that they—matured by an earnest and patient meditation—shall hereafter spring up and overshadow the departments of our working population with their utility and their benefits. There are still men capable of this in every department of our multitudinous industry. We have seen too much, and too frequently, the quick apprehension and the large capacity of those who compose the great operative circles of the country, to believe that the race of our SMEATONS and our ARKWRIGHTS is, as yet, in any sense, run out. In the cultivation of this extensive field, and in the increase and preservation of its fruits, will be found the most efficient means of consolidating peace at home, and of perpetuating our power and reputation abroad. Keeping well to these moorings, we shall be likeliest of all to outride those storms in which more adventurous and less labourious nations have been lost, and the hopes of our species, in a restoring future, permanently frustrated.

It is at all times gratifying to have to record instances of individual liberality in a good cause, and much more so when the act is directed to a public good, and the welfare of a toiling portion of the community; to however little extent such benefit may eventually be secured, the intent is the same. We are led to these remarks from a communication received from Mr. CRANE, of Birmingham, which will be found in another column, descriptive of a miner's safety lanthorn—the invention of that gentleman; for which, although no new principle is evolved, he would undoubtedly have been able to secure a patent. The right of manufacture and sale, however, he very handsomely gives to the public, to reap whatever advantages may result from the invention; and the letter itself we recommend to the perusal of our readers, from the evident single-mindedness and earnest philanthropy which it displays towards lightening the labours of that class of our fellow beings who are obliged to toil in the darkness and dangers of the mine. With respect to the lanthorn itself, it appears to us capable of giving a much greater light than even a naked candle, and evidently with a safety equal to that of the Davy lamp.

We find that the Bill for winding-up joint-stock companies, with the amendment referred to in our columns of last week, has passed the House of Lords—the third reading having taken place on Thursday last. Several amendments were made, having reference, however, to the working of the bill, and in no way affecting the clause to which we directed attention in our last. It now only remains for the Members of the House of Commons, and those interested in mines, to direct the attention of the Legislature on the bill being returned with the amendments. We do not calculate upon the Cornish Members taking part; for the county, so far as the Stannaries' Court is concerned, is protected. It, however, behoves all other parties interested in mining to take those measures for the protection of their own interests, by preparing a measure, to be brought before the Legislature early in the next session; and we have no hesitation in saying, from the communications we have had with Her MAJESTY'S Government, that a measure of the kind would have its ready concurrence, if even it was not introduced in that quarter. We have only to repeat, that it is with the miner and mine adventurer, in times like the present, carefully to watch their own interests, and not trust to others or to chance.

Considering the average annual expenditure on the railways now constructing in the United Kingdom is about 40,000,000*l.* sterling, we do not see very distinctly how that heavy outlay can be much augmented without fettering, or injuriously affecting, the other large branches of public industry, which must be replenished from the same deep well, which, notwithstanding, is of quite a fathomable depth—namely: from the realised capital of the British people. Of course, there might be an augmentation, but not one that would be sensibly felt in so great a class of undertakings as railways, and would be spread over so long a period as that of a solar year. If a man had settled with himself to spend 40*s.* on a trip to Herne Bay, it might little affect his case, that he had lightened himself of 42*s.* or 44*s.*, instead of his first estimate. It is much the same thing with the expenditure in railways for the year; an excess of 2,000,000*l.* or of 4,000,000*l.* more than the sum stated would not materially disturb, nor seriously alter, the fulness of the stream which had flowed out in this direction from the bullion river of the State. It is true, that whatever feeds the skilled labour—whatever enlarges the circle of industrial occupation of our operative throngs—is to us as a people of the very first importance. Nothing so directly and so surely creates new wealth as the travail of the artizan and the labourer; and, therefore, some additional millions paid for wages is so much seed sown, which will yield a doubly remunerative crop; but we must have an eye as well to the fields which we may possibly leave unploughed as to those on which we are bestowing the fulness of our husbandry; our gain in the one case may be fully counterbalanced by our loss on the other. For these, and other reasons, it may be doubted, if any considerable increase of the railway undertakings of the kingdom is desirable under present, or, indeed, under any circumstances; but that is very different from a spirited prosecution of those actually in hand. We do not see, with the large expenditure spoken of, what adequate reason can be given for the torpor which exists on finishing, and bringing into working activity, the mass of lines now in preparation. As a matter of course the rails are not auxiliary, but part of the final furniture of a railway. Still, why the convenience of the iron trade has been so little considered as to the time of supplying the rails, or why the burning on, or the blowing out, of the furnace fires has been so utterly a matter of indifference to the majority of railway directors, we have no means of satisfactorily determining. What we may determine is, that the recent depression of the iron trade has been made all the greater, by the tardy and irregular manner in which the orders for the iron-work of the nascent lines have been received, and this irregularity and slowness it would be the better and the fairer for all parties to cease being persevered in.

We call attention to an article, in another column, respecting a notice of action having been served on a Mr. ALEXANDER, as owner of some mines in Scotland, on the grounds that, under an obsolete Act of the 1st of JAMES of ENGLAND, 1592, all mineral property in Scotland is the property of the Crown. We cannot for a moment suppose that any Government would have the temerity to take so offensive a step with any intention of proving the right to seize upon all Scottish mineral lands; but should hope it is merely a preliminary step to show cause for the necessity of an Act for the immediate repeal of the objectionable and absurd law—indeed, the answer of Lord MORPETH is conclusive on this subject. We can, however, hardly trust ourselves to speak of the conduct of the LORD ADVOCATE of SCOTLAND in recommending Government to *establish their claim* to the mineral property of his countrymen; we think there must be some misunderstanding of the terms used.

In our columns of to-day will be found reports of the meeting held of the shareholders in CAMERON'S STEAM COAL COMPANY, preparatory to the regular meeting, convened for Friday next, at the company's offices. We have only to direct attention to the proceedings and the charges made, which will, doubtless, be met by the directors at their forthcoming meeting. We have here another instance of the imperfect system under which companies are carried on under the Joint-Stock Companies' Registration Act. We have no hesitation in saying, that the company have not observed the clauses of the Act; and, moreover, that the powers of the Act itself cannot enforce the penalty. There can be no question, that the sooner the Act be repealed, or amended, the better. In the former case, money would be saved by the abolishment of useless offices; in the latter some good might be derived; but, we think, it would be far better to begin *de novo*, than to attempt to botch-up the present imperfect Act. As regards the Cameron's Steam Coal Company, we expect that the *exposé* of next week will bring about something satisfactory, and place matters in a state which will, we trust, be conducive to, and promote, the interests of the shareholders.

MINES IN SCOTLAND—CLAIMS OF THE CROWN.

In the House of Commons, on Thursday evening, the Earl of LINCOLN asked the noble lord at the head of the Woods and Forests a question, of which he had given previous notice. His question referred to an action which had been brought very recently under the direction of the Commissioners of Woods and Forests against the proprietor, or rather reputed proprietor, of certain mines in Scotland, by which action it was intended to raise, under what had been hitherto considered an obsolete Act of Parliament, a claim on the part of the Crown to the whole of the minerals in Scotland, not merely of the precious metals, but coal and iron also. The action was commenced by issuing a summons declaratory against R. A. Alexander, and the Act under which it was brought was of so old a date as that of 1592, being in the reign of James I. of England. The noble lord was, of course, aware that the law of Scotland and of England, as regarded the claim of the Sovereign to all minerals, was precisely similar, until it was altered by two Acts of Parliament—viz.: the 1st of William and Mary, chap. 30, and the 5th of William and Mary, chap. 6. But those Acts related only to England; and, since that time, the claim of the Crown in England applied only to mines of gold and silver. But the action brought against Mr. Alexander was founded upon the Act of James I., under which the Crown claimed the whole of the minerals throughout Scotland, without any other advantage to the proprietary of the soil than a preference of purchase.

The LORD-ADVOCATE said, this claim did not apply to coal.

The Earl of LINCOLN was aware that, practically, it did not, as the mineral in question was called black-band, and this was a mine which had been recently discovered. He apprehended that the only advantage which was given under the Act of James I. to the land proprietor was that of having the option of taking the mine, on condition of paying one-tenth of the produce to the Crown. Should this claim be established, the practical result would be, the closing up of almost the whole of the mines in Scotland, not only to the destruction of the proprietors themselves, but to the entire abandonment of the works, and the consequent throwing out of employment an immense number of people, who would not be otherwise employed. The question he, therefore, wished to ask the noble lord was, whether he would undertake to introduce any bill in the present session for the purpose of assimilating the law of Scotland with the law of England on this subject, and of quieting the titles of all parties to the minerals in that country—a measure which practically would not only be abandoning the claim raised against Mr. Alexander, but preventing any similar claim being raised in future.

Lord MORPETH observed, that in answer to the question of the noble lord, he had to state that the declaratory summons issued by the Woods and Forests was under the advice of his hon. friend, the Lord Advocate of Scotland, as the law adviser of the Crown, who advised that department to try and establish the right of the Crown to these mines. But it was never the intention of the board, with which he had the honour to be connected, to resort to any oppressive or injurious proceeding towards the proprietors of the mines. Under that advice the Woods and Forests had proceeded, and they were now in communication with the Lord Advocate to consider whether they should not bring in a bill to settle the law upon the subject, and by which they hoped to put it upon a footing satisfactory to the proprietors in Scotland. He could not, however, undertake to introduce such a measure during the present session, but he could, at least, give the noble lord an assurance that no further proceedings would be taken under the ancient statute of James I. till further consideration had been given, and the intention of the Government had been declared.

EXTRAORDINARY SLAB OF NATIVE COPPER.—We have, during the past week, had an opportunity of inspecting one of the largest masses of native copper which we believe has ever been produced, or, certainly, that has come under notice, in England. The slab to which we refer has been extracted from the Trenance Mine, situate four miles south-west of the Lizard Point, Mullion, in the county of Cornwall. The rock in which the lode is placed, from whence this "prill" has been obtained, is serpentine, very ponderous, and, we should imagine, containing metal, whether tin or other substance. The lode is about 4 feet big, and at the point from whence the slab under notice was obtained, is about 14 fms. in depth, and would appear to be the same run of ore as that obtained at about 6 fms. nearer surface, and reported in our columns some 12 months since. The slab is about 7 ft. 6 in. in length, and about 2 ft. average in width; the extreme point being 2 ft. 6 in., while the thickness varies from 4 to 12 inches, or giving an average of 8 in., forming part, as we are informed, of a slab, measuring at least 30 ft. in length.

PREVENTION OF BOILER EXPLOSIONS.—In the *Mining Journal* of the 1st inst., we noticed a communication by "Cavendo Tutus," on the subject of a steam whistle, to be attached to stationary boilers, to give notice when the water was getting low. We have since received a communication from the inventor, Mr. Joseph Spencer, of the Bilston Iron-Foundry, with a description and tracing of the machinery. It is very simple, and, we should say, effective and secure; consisting of a common steam whistle, placed on the top of the boiler—the passage of the steam to which is closed *inside* the boiler by a valve opening downwards, having an open link attached, and kept close by a balance lever. The float lever works in this open link, and as the water gets low it pulls down the valve, and admits the steam to the whistle, immediately giving notice to the attendants. The works being all inside the whistle cannot be tampered with.

ISTHMUS OF PANAMA.

It will be in the recollection of our readers, that a privilege was granted to a French company by the New Granada Government, to make a railway to facilitate the transit between the Atlantic and Pacific oceans. This exclusive grant was to be in force for 99 years, with the benefit of about two-thirds of the territory of the Isthmus, provided $600,000 were paid to the Government, as a guarantee that the object should be carried into effect. Subsequently, Mr. Evan Hopkins, C.E., was engaged by the New Granada Government to make a geological and topographical survey of the Isthmus, and report on the practicability of the undertaking, and other points of interest—abstracts of which report were published in the *Mining Journal*, in June last. The time, however, allowed to the French company for paying the guarantee having expired, and the money not being forthcoming, M. Mosquern, the New Granada Minister, has announced that the privilege is null and void. We now learn that a treaty is concluded between the United States and New Granada, the particulars of which, so long and anxiously expected, have at length transpired. We are now in possession of the treaty itself. It bears date the 12th December, 1847, and is comprised of 36 articles; the ratifications between the contracting parties were exchanged on the 10th June, 1848.

This is a treaty of reciprocity in the fullest sense of that much-abused term. The conquest, or reduction, of Mexico was decided upon about the date of this arrangement with New Granada. It is always desirable to proceed under the colour of treaties: the possession of valuable rights by bargain is always a safer course than their exaction by force of arms, especially so when circumstances may arise which may involve projects of aggrandisement in serious collateral claims or disputes. Whatever schemes the late Government of France might have entertained, in reference to this portion of the Granadian territory, or whatever the views of our mysterious colonial officers respecting it, it is now apparent that all questions of transit from sea to sea, upon, or through, or over, the celebrated Isthmus of Panama, with the real possession of the ports on the opposite seas, Chagres, Portobello, and Panama, have received a determinate shape by the prompt action of the United States Government; and, doubtless, the advantages of the quick transit by the Isthmus is of greater interest to the States than to any other country. By the first subsidiary declaration, under the 35th article of this Bogota treaty, the territory of the Isthmus, from the southern extremity to the frontier of Costa Rica, and the transit from one sea to the other, are thrown open to the enterprise of the United States. New Granada guarantees to the States a perfect equality with its own citizens—in the enjoyment of every right of transit across the Isthmus, by all existing, and by all future routes, or modes of communication; and in return for these and for other very complete privileges and advantages of a commercial character, the United States have guaranteed, absolutely and effectually, to New Granada, the perfect neutrality of the Isthmus itself, in order that the free transit from sea to sea should not be interrupted while this (20 years) treaty lasts, and also the right of sovereignty and property over the territory.

We may also state, from good authority, that the Government of New Granada has removed this year the commercial restrictions which have been so annoying to trade and passengers, not only in the shape of duties, but also causing great delays, as recommended by Mr. Evan Hopkins in his report, in order to encourage parties to effect the grand object of communication. It is certain that, when the transit of this interesting neck of land is improved, the rich quicksilver mines of California, and the great coal deposits of Van Couver's Island, will very shortly engage the attention of our capitalists. It, therefore, behoves the English Government to have an eye in this quarter, inasmuch as the western part of America will, at some future day, become of great importance; and there should be a port established in time on the western coast, or there may be danger of losing our superiority and command in the Pacific Ocean, and, perhaps, in China.

We have now a clear view of the most prominent bearings of the undertaking. It is proposed, also, that a communication should be effected within the territory of the United States, and that the line should commence at the port of Charlestown, in South Carolina, to Memphis, in Tennessee, thence to Monterey, or San Francisco, in California. From Charlestown to Tennessee, a line is already completed, and the distance from Memphis to Monterey, is 1500 miles. By this route the distance from the English Channel to the Pacific would be 5370 miles. The general advantages of constructing such a line consists in the fact, that the increase in the value of land through which it would pass would far more than cover the outlay to be incurred; and, also, that such a line would confer exclusive advantages on the United States, which they could never obtain by the originally proposed line across the Isthmus of Panama. The particular recommendations of the California over the Oregon route are the secure nature of its harbours, their convenient position for the American fleet of 300 vessels, employed in the whale expeditions in the Pacific, and the central point they would present for a great naval station and dockyards. It is evident that, with a line of railway uniting the eastern and western coasts, the shores of the Atlantic with those of the Pacific, the United States would be in a position to command the entire trade of the east, and it would bring Bombay, Calcutta, Singapore, China, Japan, New Holland, Australia, and the islands of the east, many thousand miles nearer than they are to England. The distances from the principal parts in the east to England and California, would be as follows:—Calcutta: England, 12,200 miles; California, 9300—Bombay: England, 11,300; California, 9800—Canton: England, 13,700; California, 6100—Singapore: England 12,300; California, 7400—Japan: England, 15,200; California, 4500—New Zealand: England, 13,500; California, 5600.

NOISELESS CARRIAGE WHEELS.—Now that the wood-paving mania has subsided, we know of no invention which could prove more welcome to the public than the improvements recently effected in wheels and carriages by Mr. Andrew Smith, C.E., of Millwall, Poplar, the patentee of the galvanised iron wire-rope—Mr. Smith having succeeded in adapting his galvanised iron not only to a superior manufacture of wheels, but also to the springs, the reins, and even to the horse-shoes. The reins have increased strength, and the properties of the wheels and springs are not obtained at the expense of appearances, nor by any additions which detract from the elegance of the vehicle. The tire of the wheel is composed of several layers of galvanised plate iron, lapped and rivetted together, and then regalvanised in the mass, and which, when running over the stones, make no more noise than if running on a surface of lead, a result produced partly by the galvanization, and partly by a division of parts, entirely cutting off thereby the vibration: the nave, or box, is lined with an elastic substance, which makes a perfect stuffing-box, and thus prevents any noise from the axle. We had an opportunity of judging of the efficacy of the various applications during the past week in the crowded thoroughfare of Fleet-street, when the rattling noise of surrounding carriages afforded a striking contrast to the easy steadiness with which Mr. Smith's vehicle glided along. We have no doubt of soon finding these inventions pretty generally adopted, as securing to the tradesman the much-sought quietude, so requisite for the transaction of business, with ease and safety for the traveller. We understand, also, the wheels are about being adopted on one of our metropolitan lines of railway.

RAILWAY FENCING.—An important decision to railway directors was arrived at by the Skipton magistrates, in the case "Dale *v.* the Irish North-Western Railway." It appears that, on a portion of their line, they had erected a fencing of galvanised wire, which was complained of as being inefficient for the purpose—several instances being adduced of sheep and cattle getting entangled in the wires. After a pretty lengthy inquiry, Mr. F. Morton, the agent of the galvanised wire fence, stated, that he was employed to put it up on this railway; he also put it up on the Chester and Holyhead, Liverpool and Ormskirk, Caledonian, Ayrshire, Chester and Shrewsbury lines, &c.; on the Southampton and Dorset line a sample fence was set up, and the Commissioners of Woods and Forests supported it; has had complaints of the fence in fox-hunting districts; 400 landholders in Scotland have this fence. The magistrates eventually decided, that it *was not a sufficient fence*; and the order of the court was, that a wood fence of 4 ft. 6 in. high, and five bars, 6 in. apart, be erected by the company, and completed within a month. This decision will be seriously felt by the company, as it is understood they have provided materials for fencing the whole of their line. It is estimated that their loss in consequence will not be less than 8000*l.* or 10,000*l.*

MINING IN SOUTH AUSTRALIA.—We are happy to learn that, in following up two of the lodes of rich silver-lead ores lately intersected in the Wheal Gawler Mine, the very promising prospects which they presented when cut are now being realised, fully confirming the highly-favourable opinion previously entertained of the property in question by its persevering and spirited owners. —*South Australian Register*, February 16.

RAILWAY TRAFFIC AND PROFIT RETURN.

The London *Weekly Railway Share List* of last Saturday contains a table of the gross receipts of railway traffic for the six months ending June 1847, and June of the present year, with the proportions which such receipts bear to the comparative mileage, in order to remove the impression which prevails, that according to the increased amount of receipts, so in proportion do the railways increase their profits. The following is the table referred to:—

Railways.	First Half-year, 1847. Gross Receipts.	Average miles opened.	Receipts per mile.	First Half-year, 1848. Gross Receipts.	Average miles opened.	Receipts per mile.
Birkenhead, Lanc. & Chesh. Junc.	£17754	15	1184	£19520	15	1301
Dublin and Drogheda	20410	35½	575	19092	35½	538
Dublin and Kingstown	22408	7½	2891	23541	7½	3038
Dundee, Perth, & Aberdeen Junc.	10248	32½	315	21267	47½	447
East Anglian	—	—	—	12783	51	251
Eastern Counties and Norfolk	304467	242½	1256	353623	289	1224
East Lancashire	17584	24	733	26547	25	1062
Eastern Union	16120	43½	371	28875	51	566
Edinburgh and Glasgow	86063	46½	1851	84574	52½	1619
Edinburgh and Northern	—	—	—	29059	36½	796
Glasgow, Paisley, and Ayr	59186	60½	981	52338	66	793
Glasgow, Paisley, and Greenock	27399	22½	1218	26225	22½	1166
Great Southern and Western	33025	57½	585	55232	103	536
Great Western	476691	244½	1948	450548	281½	1727
Kendal and Windermere	—	—	—	3522	10½	344
Lancaster and Carlisle	—	—	—	41110	70	587
Lancashire and Yorkshire	207376	94	2206	236511	125½	1885
London and North-Western	1010229	378½	2669	1002979	428	2343
London and Blackwall	24691	4	6173	22978	4	5744
London, Brighton, & South Coast	183935	122	1508	210145	158½	1326
London and South-Western	188346	132	1427	205291	191½	1072
Londonderry and Enniskillen	—	—	—	3607	14½	249
Manchester, Sheffield, & Lincolns.	50675	44½	1139	59320	57½	1035
Maryport and Carlisle	15567	28	556	14231	28	508
Midland	477135	369	1293	499557	410½	1217
Newcastle and Carlisle	56044	65	862	52585	65½	803
North British	39227	76½	513	49910	82	609
Shrewsbury and Chester	10095	17	594	15221	33	662
South Devon	14089	20½	696	26057	36½	717
South-Eastern	188950	145½	1296	198887	161	1235
Taff Vale	35639	38	938	44074	38	1160
Ulster	20157	25	834	19869	32½	611
Whitehaven Junction	—	—	—	4515	12	376
York and North Midland	151084	164	921	190367	234	814
York, Newcastle, and Berwick	202007	158	1279	278410	240½	1158
Totals £	3967301	2713	—	4418509	3506¾	—

The number of miles of railway brought into operation by the above-named companies was, therefore, 686½ during the 12 months ended June 30, 1847, and 526¼ during the 12 months ended June 30, 1848; and it would appear that thus far the disadvantage attendant upon the opening of new mileage is nearly equalised between the periods compared. At the same time, it is to be borne in mind that the extreme rapidity of construction, and the large proportionate extent of new line worked during this period, has, apart from all other depreciating causes, tended very materially to lessen the mileage receipts. The table shows that in two years no less than 1212¾ miles have been opened out of 3506¾, rather more than one-third of the whole. The gross traffic receipts of the first half-year of 1847 amounted to 3,967,301*l.*, which, divided by 2713, the average number of miles open, shows an average receipt per mile, upon the whole, of 1462*l.* The total traffic receipt of the first half-year of 1848 amounted to 4,418,509*l.*; and the average number of miles open having been 3506¾, the average receipt per mile, upon the whole, has been 1260*l.* The decrease in the mileage receipts has thus averaged, during the latter half-year, 202*l.* per mile, or, at the rate of 13·82 per cent. This is a very great falling off in the mileage traffic receipts, but the deficiency is accounted for by the large proportion of new mileage, and the prostrate condition of commerce.

Although there has been an increase in the mileage receipts of some of the newly-opened lines; such as the East Lancashire, the Eastern Union, the North British, the Shrewsbury and Chester, and the South Devon; still the class of receipt arising from them is very inferior in amount to that of the old trunk lines. The average half-yearly receipt upon the class of railway lately opened does not, at present, exceed 700*l.* or 800*l.* per mile; while that of the original trunk lines is 1500*l.* to 1600*l.* per mile; facts which suggest the question whether the inferior receipt upon new lines is counter-balanced by a corresponding economy in construction and working. It is believed that, up to the present time, the average mileage cost of the whole of the railways in operation is quite as great, if not greater, than at any previous period; although, from the obscurity of some of the accounts, the question of mileage cost is by no means easy of solution. It is believed that the working expenditure now bears a larger proportion to the revenue receipts than heretofore.

CONSEQUENCES OF A BREAK OF RAILWAY GAUGE.

The numerous observations in the public press, the expressed opinion of individuals, and Parliamentary discussions, on the evils arising either from a break of gauge, or a mixture of the narrow and broad gauges, on our railways, would appear to preclude the necessity for any general observations on the subject; but, as Capt. Simmonds has reported that the two may be combined with *perfect safety to the public*, the case comes before us with more important features than before, and is deserving of further and most serious consideration. It is well known to the railway public, that the line between Gloucester and Cheltenham was chosen for the first experiment of the break of gauge, and on which it has been in operation a very considerable time; yet, although this is a very short line, with no cross traffic, and no stations between the termini, numerous difficulties are continually met with, requiring the utmost care of the attendants to prevent accidents; and all passengers, going either to or from Cheltenham and Gloucester, by any of the through broad-gauge trains, have to change carriages on an exposed platform one mile from the latter city. Through the report of Capt. Simmonds, Parliament has sanctioned lines on the double gauge from Oxford to Rugby, and from Oxford to Birmingham; and this circumstance having rendered the subject a very serious one, in a public and commercial point of view, a pamphlet, on the consequences likely to result from the indiscriminate extension of this system, from the pen of Mr. Samuel Sidney, has just been published,* and from which we proceed to give some extracts, as forcibly descriptive of the evil results likely to be anticipated. Regarding the increased expense in the formation of the broad gauge over the narrow, the author shows that the addition will be, in flat ground, 500*l.* per mile as the minimum; and, on lofty embankments, deep cuttings, tunnels, &c., from 10,000*l.* to 20,000*l.* per mile; and that to convert a simple line of railway, of any extent and traffic, into a mixed gauge cannot be less than from 10,000*l.* to 20,000*l.* per mile; and the working expenses on such a line as the London and Birmingham would be 514*l.* per mile additional. If the Great Western were converted into a mixed gauge line, the switches alone would be increased, at the Slough station, from 37 to 77; and, as the contract price of each switch for the Birmingham Railway is 50*l.*, the additional expense for that article alone would be 200*l.* at one station. This is one of the most trifling instances of increased expense. There would also require, on one permanent way of three rails, a double number of stations and sidings, a duplicate set of broad and narrow-gauge engines, carriages, trucks, &c., and a proportionate increase of engine-drivers, switchmen, police, &c. In giving the averages of third-class passengers to the total number, it appears that, on nine narrow-gauge lines, it was 66 per cent.; on the Great Western, 15 per cent., and that it charges 33 per cent. more than the metropolitan narrow-gauge lines.

When we consider that the Great Western has been more successful than any other railway in its Parliamentary contests; that it has never suffered from competition; that it has enjoyed these high fares; when we also consider its present notoriously desperate financial position—in debt 5,000,000*l.* sterling, without credit to obtain any money on debentures, without any capital on hand—it is impossible not to wonder what has become of the money which ought to have been saved, according to Messrs. Brunel and Gooch, by their economical system: If this is the result of the broad gauge, what will be the result of the mixed gauge? There might be some consolation if the mixed gauge, when completed, was superior to ordinary railways. On the contrary, it is certainly infinitely less convenient and much more dangerous.

Mr. Sydney then makes numerous extracts from several writers on the subject—all most conclusive of the unnecessarily increased expense which would be incurred by the change; the additional dangers and inconveniences which would result, and the extreme folly which would be exhibited in making this country a laughing-stock to all civilised nations, if we sanction most erroneous and injurious plans, merely for the purpose of enabling the Great Western Company to push the system from town to town in search of dividends, like Peter Schmel looking after his shadow.

In the Railway Committee, yesterday, on the Great Western Railway Bill (Mixed Gauge, from Fenny Compton to Birmingham, on Birmingham and Oxford line), the Chairman made the important announcement, that the Committee had come to the resolution that the preamble of the bill was proved, and had determined to retain the clause, authorising the laying down the mixed gauge from Fenny Compton to Birmingham. The Committee, however, had decided upon so altering the clause, as to bind the Great Western Company to maintain both gauges in working order, and provide the public with a narrow as well as a broad gauge working track, so that the London and North-Western might work their trains over the line without inconvenience. They had also added a provison to this clause, enacting that in the event of the working of the mixed gauge being found to be dangerous or inconvenient to the public, the Board of Trade should have power to order the Great Western Company to take up one of the gauges, the same board having the option of deciding which gauge it should be—the narrow or the broad. The Committee subsequently decided, that a clause should be added to the bill, to authorise a junction at Birmingham between the Birmingham and Oxford and the London and North-Western lines; the manner in which such junction was to be effected to rest with the Board of Trade.

* *The Commercial Consequences of a Mixed Gauge on our Railway System Examined*: by Samuel Sidney, author of the *History and Prospects of the Railway System*, &c. Smith, Elder, and Co., Cornhill.

RAILWAYS IN INDIA.

The vast importance, the absolute necessity, of the introduction of the railway system into our vast territories in India, have never been questioned; the subject (one of vast magnitude) has, for some years, been boldly grappled with; capitalists of the first standing in the world had colleagued for carrying out measures calculated to give to India this great desideratum, and arrangements entered into with the East India Company for such purpose, when the great commercial storm arose, which, in its fury, swept away half the established institutions of the states of Europe, paralysed their efforts, and, as regards Indian railway projects, it is very generally believed that all of them are either defunct, or in a perfect state of torpor. The "East Indian Railway Company," the magnitude and importance of whose line are far greater than that projected by any other company, uniting Calcutta, the seat of Government, with Delhi and the western frontier, are, we are happy to find, in an improving position. At a special general meeting of the proprietors, held on Tuesday last, the 18th inst., Mr. Aglionby, M.P., in the chair, the proceedings and the results fully evidenced that the great importance of the undertaking was still the principal feeling in the minds of all, the best means of carrying it out being the only topic for consideration. The report stated, that from the short period intervening between the date of the call made in April last, and the time fixed by the East India Company for the payment of the deposit of 100,000*l.*, it was hopeless that the required sum could be raised in time—they had, therefore, applied for an extension of time, but which had been declined. Under these circumstances, two alternatives presented themselves to the directors—the one, winding up the company, taking the chance of obtaining a return of the whole or a part of the expenses incurred, in the event of the East India Company proceeding with the undertaking; the other, of bringing back the court to a consideration of the views originally submitted to them by the company, of the policy of commencing operations, in the first instance, on one section of the line between Calcutta and the north-west provinces.

In weighing these alternatives, the directors could see no adequate reason for abandoning the undertaking at a sacrifice, the merits of which remained the same as they had always been. They had, therefore, applied to the company, whether a proposition might not be discussed for a contract for executing a portion of the line between Calcutta and the north-west provinces, not exceeding in cost 1,000,000*l.* sterling; to which a reply was received, stating that the company agreed to the proposition, on condition that the sum of 60,000*l.* be forthwith deposited in the company's treasury; and that proof be adduced, within four months, that the railway company will be able to raise the capital of 1,000,000*l.*, as proposed, so as to carry on the undertaking without delay. This the directors considered a position of comparative advantage, as a deposit of only 60,000*l.* will have to be made, upon which 5 per cent. will be immediately receivable. Should the proprietors resolve to proceed, the directors see no reason to doubt that the undertaking will become a work of great national importance. The amount of shares, on which the first call of 20s. per share had been paid, was 37,441, representing a capital of 748,880*l.*; but it was believed, that if the deposit was paid, the subscribers would be augmented both in Europe and in India. The funds in hand consist of 14,860*l.* 3s. 9d., invested in Exchequer Bills, 24,785*l.* 15s. 9d. in India Bonds, and 23,535*l.* 14s. 10d. in cash = 63,181*l.* 15s. 4d.

Looking also at the intrinsic merits of the undertaking, and the value of the terms offered by the court of directors of the East India Company, coupled with the expense and labour incurred, it seemed to the directors that it would be a cause of regret to every interest connected with it, if, with such progress made, and so much information gained, the undertaking were allowed to fall to the ground. The directors, however, had only to add, that on whatever course the proprietors resolved, they might rely on their unremitting exertions to give effect to their wishes, and to advance and protect their interests to the best of their ability.

The result of this meeting was the passing of a resolution—making a call of 2*l.* per share, in order to make the deposit of 60,000*l.*—on the understandtanding that it was to be returned, if the proposed contract was not agreed to. Mr. John Bourne, C.E., one of the engineers to the line, has lately published an addition to his former work on railways in India, illustrative of the practicability of rendering available existing works in diminution of the cost of such undertakings, whereby their profits may be greatly increased. He considers that circumstances have provoked the inquiry, whether the works of the present trunk road could not be made available in abatement of the railway expenses; and, after a survey of it throughout its length, he can see no reason why it should not be adopted, if the consent of the Government could be obtained. This road is carried on an embankment all the way from Hoogly to Benares, and is of superfluous width for its present purpose; and if it were narrowed for the use of the railway, the remaining width would afford as effectual accommodation for the ordinary road traffic, and would be capable of being more easily kept in repair.

There would be saved, by this arrangement, 400 miles of embankment, and about 150 bridges, some of them of large size; but the most important consideration is, that the acquisition of these works would enable the 3,000,000*l.* of guaranteed capital, to open up the whole line from Calcutta to Mirzapore. The shareholder, by this measure, would be placed in much the same position as if the permanent way of the line had been already completed; and it would be impossible that a railway, requiring merely the addition of the rails to perfect it, could be abandoned.

Newcastle and Carlisle Railway.—The service of silver-plate, voted to Matthew Plummer, Esq., by the Newcastle and Carlisle Railway Company, in acknowledgment of his long, laborious, and successful services as chairman of the board of directors, was presented to that gentlemen in the Newcastle Assembly Rooms, on Thursday last. The manufacturers, Messrs. Reid and Son, are now exhibiting it to the public.

Liverpool, Manchester, and Newcastle-upon-Tyne Junction.—The motion for a select committee of inquiry, which was to have been made by the Marquis of Londonderry on Monday last, was withdrawn on the understanding that the petitions of some further landowners, which embodied certain allegations relating to the conduct of the directors, should be received and referred to the select committee on the Bill, and be entrusted to Mr. Mosse, the oppositionist.

London, Brighton, and South Coast.—The policy of the directors has received a check at the hands of both the House of Commons and House of Lords. The Commons rejected the proposed subscription of 300,000*l.* to the Direct Portsmouth Railway; and the Lords rejected the Continental Steam Boat Company's transfer of their concern (quasi-amalgamation) to the Brighton Railway Company, who are raising money at 6 per cent., to liquidate their debenture debts.

Salisbury and Yeovil, Exeter, Yeovil, and Dorchester, &c., (Extensions of the South-Western).—Since the decision of the committee of the Peers in favour of these extensions, vast preparations are making to proceed vigorously, first to Yeovil. A great many more hands have already been engaged at the works between Basingstoke and Salisbury. At Ash, Overton Freefolk, Hurstbourne Priors, Andover, Abbott's Ann, Amport, Quarley, Boscombe Idmiston, Winterbourne, and Laverstock, the rails are being laid down rapidly, the roads and bridges appearing, as if by magic, in different localities. Over the road leading to Stratford, near Salisbury, a good and substantial bridge is nearly finished, and the line continued through the nursery grounds of Mr. J. Keynes, of Castle-street, in that city, across the water and meadows, to Fisherton Anger, on to Wilton. In those places men are to be set to work in a few days; the same also at Gillingham, Shaftesbury, Sherborne, direct to Yeovil. In most parts the grounds are staked out, bricks and timber carted thereon, barrows, carriages, waggons, planks, and every other necessary tool and article conveyed to each district; so that, when once commenced, not the least delay shall take place afterwards. The inhabitants of Salisbury have been in high glee since the passing of the Bill, and various meetings held to commemorate and congratulate each other on the successful termination of the struggle between these two great rival railways, unprecedented both for the length of time taken, and the great amount of money it cost, to carry out the same.

Placing Obstructions on Railways.—The magistrates at Taunton have recently committed four men (navvies) for trial at the ensuing sessions, for placing an obstruction on the main line, and perilling the lives of the passengers who were travelling by a mail train. The obstruction was almost similar to that which led to the deplorable catastrophe at the Shrivenham station. It appears that they were engaged in clearing away some hay from the banks of the line, the work having to be done after the mail train had passed. It was, however, nearly two hours late; and the men thinking it had gone by, placed a truck on the line. Scarcely had they done so, when the train came up, and the red light not being sufficiently large or properly placed, a collision took place.

Mr. Roberts, C.E., estimates that works for watering the town of Galway would cost 20,000*l.*, including 12,000*l.* for four miles of pipes and a reservoir.

Original Correspondence.

THE COPPER DUTIES QUESTION.

Sir,—Yours is the only London Journal to which we can look for extensive and valuable information touching those important branches of our general wealth—the various mining properties and interests of the country. Among the multifarious communications which are exhibited to public notice in your columns, none attract more attention than your quarterly summaries of that essential branch—the copper trade.

In your Number of the 24th June, you gave the usual statistics of the copper trade for the quarter ending on that day; and, in the succeeding Number, you furnished the details of the produce of the several mines, for the same period. I will, for the moment, pass over the last item of information, which is more interesting to those immediately engaged in the undertakings, than to the public at large, and will address myself to one branch of the summary of the 24th June—the general results of the copper trade of Cornwall and Devon.

I wish, for the sake of all concerned, that I could show results different from those which force themselves upon the attention, in the consideration of this question—for a state of things really lamentable presents itself upon the examination of the details. Let us look at those details. It appears

That the total sales for the quarter were	*Tons*	46,018
That the total amount of the sales was	£	187,770 14 6
That the average price of the whole quantity was	*per ton* £	4 13 10
That the average produce in metallic copper is *computed* at	*per cent.*	8¼ or 8·25
That the total produce in metallic copper, resulting from that computation, was	*Tons*	3801
And that the average cost of the ores to the smelters was equal to, per ton of metal	£	56 17 8

Now, Sir, by a careful compilation of the trade in copper ores, as sold at the public Ticketings in Cornwall, for the 15 years ending the 30th of June, in each year, from 1833 to 1847, both inclusive, I have ascertained,

That the average price of ore, for the whole of that term, was	*per ton* £	5 15 4
That the average produce for the whole term was	*per cent.*	7·63
And that the average cost to the smelters was, per ton of metal	£	75 11 7

Let us next see what are the results of these different figures—

The general average price of the 15 years, 1833 to 1847, as shown above, was	£	75 11 7
From which deduct the average price of the last quarter, also shown above, or		56 17 8
Showing a decrease, paid by the smelter to the miner, per ton of metal, of	£	18 13 11
Or 24 7-10ths per cent. below the average of 15 years.		
The lowest average price of any one of the 15 years, 1833 to 1847, was	£	68 5 0
From which deduct, as above		56 17 8
Showing a decrease, paid by the smelter to the miner, per ton of metal, of	£	11 7 4
Or 16 6-10ths per cent. below the lowest price of 15 years.		
The average price of the last year, 1847, was	£	69 8 6
From which deduct, as above		56 17 8
Showing a decrease, paid by the smelter to the miner, per ton of metal, of	£	12 10 10
Or 18 per cent. below the average price of last year.		
The average price of the preceding quarter, ending 25th March, 1848, was	£	64 8 1
From which deduct, as above		56 17 8
Showing a decrease, paid by the smelter to the miner, per ton of metal, of	£	7 10 5
Or 11 6-10ths per cent. below the average price of the preceding quarter.		

Here, then, we have a return of the last quarter's trade, yielding less to the miner for his ore, on a comparison with the first quarter of the present year, by above 11 per cent.—less than the average price of last year by 18 per cent.—less than the lowest average of any year from 1833 to 1847, both inclusive, by above 16 per cent—and less than the average price of those 15 years by nearly 25 per cent. This is surely a state of things which may well justify the remark made in your leading article of the 24th June, upon this subject:—"As mining business is at present conducted, it would really appear that the whole copper mining property of Cornwall, Devon, and Wales, was worked solely for the advantage of the seven or eight wealthy firms conducting the entire smelting process." But, I am quite prepared to hear the smelters' advocates in the House of Commons—or some of that immaculate and ill-used body, perhaps, in their own persons—exclaim, "Oh! that may be all very true, but look at the distress of the smelters! Why, on the 11th of this instant (July), they were compelled to submit to a reduction of 9*l.* per ton upon their copper, and *that* after other reductions had been made in the course of the year." True, and I want no better evidence of the enormous amount of their profits for a long period of time, as I shall shortly proceed to show; but there must be one or more good reasons for those alterations of price. Granted, that the exportation to France was not so much last year as in 1846, by 553 tons; but 63 tons more were exported to the Hanse Towns in 1847 than in 1846; and however the unsettled state of affairs in France and other parts of the continent may, at the moment, tend to retard the carrying on of transactions in copper, to us great an extent as in some former years, yet, in that respect, smelters only share the fate of every other branch of trade; and, I presume, as one of the consequences of this state of things, the bugbear of menaced smelting operations in those countries, so industriously set up by the English smelters and their friends here, will now cease to create alarm. So, again, in the United States, there is little evidence of their successful rivalry as smelters, in the fact, that the exportation of copper from this country to that last year, just made up for the deficiency to France, having been 2720 tons, or an excess over the trade of 1846 of 549 tons—more, in fact, than the export in any one year, in the annals of trade between the two countries, by just 501 tons. To the East Indies, also, we shipped more last year than in the preceding one; and the same to British North America, the West Indies, and other British colonial possessions.

What is there in all this, I ask, to justify the little knot of wealthy smelting monopolists in putting into the mouth of Lord John Russell that mass of misrepresentation and falsehood with which, on the 18th of February, he attempted to mislead the House of Commons upon this question? And that brings me to another reason, beyond what I have already stated, for this last reduction of price—a reason which I warn you and your readers to bear in mind for a future day's observation. The whole affair I believe to be a juggle on the part of the smelters. So completely has the case attempted to be made out by Lord John Russell failed—so utterly destitute of foundation has each and every part of his lordship's and their own statements been proved to be, by evidence of the most irrefragable nature—so large is the depreciation in all copper mining property—and so appalling the distress among the labouring population of the mining districts—that the smelters feel the ground to have been entirely taken from under their feet; and as a last and desperate effort, they are making this reduction a *peg* whereon to hang an argument, in the hope of bolstering up their weak and rotten case; and mark the issue. Whether they succeed or not in mystifying the judgment of the House of Commons in the future stages of the bill now before them, many months will not pass over before the price of copper will be again raised to the point from which they have now dropped it, or something nearly approaching thereto. And how is it to be prevented? With wealth unbounded, realised by that harsh, selfish, and grinding system of monopoly which has ever marked their proceedings—a power unrelentingly exercised towards the miner on the one hand, and the merchant or manufacturer on the other—the moment their purpose is answered, with reference to the question now before Parliament, however that question may be settled, they will meet in conclave, and issue their decree that the advance shall take place—a decision from which there is no power of appeal. True it is, that a remedy for this crying evil may be nearer at hand than is generally imagined. On that head I could say more; but prudence dictates present silence upon a question of such vast importance to an interest suffering so intensely in all its classes as the copper miners have done for a considerable period.

But suppose, for argument's sake, that an advance should not take place, as I have last stated. Let me, then, inquire into the position of the smelter, even with his copper stationary at the price fixed on the 11th inst., of 79*l.* 10s. per ton. He has paid, during the last quarter, and is now paying, a price to the miner for his ore, equivalent to about 56*l.* 17s. 8d. for a ton of metal; this sum, deducted from 79*l.* 10s., leaves 22*l.* 12s. 4d. Now, in the first place, the smelter receives 21 cwts. of ore for every ton, but pays only for 20 cwts.; that gives him 5 per cent. advantage. Next, he assays his sample of ore with all the delicacy of the nicest chemical tests, and pays for his purchase by that standard. Now, in his conversion of that ore into metal, upon a large scale, there exist certain impurities, which are inseparable from it; and he sells his copper with, at the least, 3 per cent. of such impurities. Thus he has gained 8 per cent. out of the

* This produce is matter of computation. In the summary to the 25th March, you say the produce was 8¼ per cent.; and, in the leading article here referred to, you say—"in produce, there is only the *merest fraction* of difference." I have assumed it to be 8¼ per cent. If the fraction is really higher than 8¼, it strengthens my case, and would make the cost per ton of metal something below 56*l.* 17s. 8d. If it is lower, then the cost of the ton of metal would be a trifle above 56*l.* 17s. 8d. In any case, the difference cannot be above a few shillings per ton, one way or the other.

miner on the one hand, and the purchaser on the other. I am not now maintaining, that this 8 per cent. covers all the smelter's expenses; on the contrary, I will be liberal to him. Out of 22*l.* 12s. 4d., the above-stated difference between what the ore costs him, and what he is selling the metal for, at the lowest point of depression, I will give him 7*l.* 12s. 4d., in addition to his 8 per cent. of advantages last described, to make up the cost of smelting; and what remains? Why, only 15*l.* per ton, which I insist that the smelter will now gain, purchasing his ore at present prices, and selling his copper at 79*l.* 10s.: and I challenge any one of the body to bring forward a plain, honest account of their actual expenses, that shall disprove my case. This is truly a most lamentable position, to find themselves, in such times as the present, reduced to a profit of only 15*l.* upon every ton of copper!

Well, but take the question in the way in which the smelter will himself be likely to put it. The highest price of copper, for the last seven years, has been 98*l.* per ton; and at that price it stood from March of the last, to February of the present, year. The price was reduced, on the 11th inst., from 88*l.* 10s. to 79*l.* 10s.—a difference, from highest to lowest, of 18*l.* 10s. per ton, or exactly $18\frac{8}{10}$ per cent.—certainly, at first sight, a formidable reduction; but let us look at the other side of the picture, and consider the prices of ores, as set out in detail in the earlier parts of this communication. The reduction in the price of ores last quarter, as compared with that of the last 15 years, is just 18*l.* 13s. 11d. per ton of metal, or $24\frac{7}{10}$ per cent.; and, as compared with last year, the fall is 18 per cent. Of what, then, has the smelter to complain upon this score? From highest to lowest his reduction is not quite 19 per cent. From a 15 years' average, the fall to the miner is nearly 25 per cent.; and, as compared with last year, the miner loses 18 per cent., or within 1 per cent. of the entire fall in the price of copper. The smelter still gains his 15*l.* per ton profit. The majority of miners are working to a decided, and, in numerous cases, a heavy loss; and the labourers generally are in a state of frightful destitution. This is the true state of the case.

Among the complaints set up by the smelters and their friends—my Lord John of the number—was the diminished importation of foreign ores. Let us look a little at that part of the question. I have before me a certain parliamentary paper, entitled—"Accounts relating to Trade and Navigation, month ended 5th June, 1848, and five months ended 5th June, 1848, presented to both Houses of Parliament, by command of Her Majesty." At page 3 of that document, I find certain statements relative to the importation of copper and copper ores. I there find that the importation of copper ores—

In the five months, ending 5th June,	1846,	was	18,529 tons
ditto	ditto	1847	13,876 ,,
ditto	ditto	1848	20,526 ,,

Therefore the importation of 1848 exceeded that of 1846 by 1997 tons, and that of 1847 by 6650 tons.

This, I presume, will not be advanced as a striking evidence of "diminished importation." Then I find, that the quantities charged with duty for home consumption are stated to have been, in the five months ending—

June 5, 1846	19,922 tons of ore
Containing	3,823 tons of metal.
In the same term of 1847	13,895 tons of ore.
Containing	2,936 tons of metal.
In the same term of 1848	19,825 tons of ore.
Containing	1,319 tons of metal.

Now, I confess that it does appear to me a little singular that 19,229 tons of ore, paying duty in the five months of 1846, should contain 3823 tons of metal; and that 19,825 tons of similar ores, paying duty in the corresponding five months of 1848, should seem to contain only 1319 tons of metal; but so it stands recorded in the document now open before me. To doubt the accuracy of this document were a serious offence. I have not yet forgotten how the noble lord, the Member for Lynn, discovered a little curious mystification of figures in a document of this nature; and, when his lordship commented somewhat freely upon the matter, in his place in Parliament, I well remember how large an amount of virtuous indignation was expended by Mr. Porter, Secretary of the Board of Trade, and his chief, the president of that immaculate board, at the bare supposition of anything like error, and, still more, of wilful misstatement, in the return in question. Unwilling, as I am, to stir up anew the bile of either of those worthy gentlemen, I will content myself with merely asking them, which horn of the following dilemma they select, with reference to this question of copper ore? Will they maintain that this account to the 5th June is correct, and that 19,825 tons of ore are really represented by 1319 tons of copper—for so it clearly stands, in black upon white, in the table? or will they frankly admit it to be an error—that the fact is not as it purports to be in the return; and that, therefore, the return is not correct? I am quite prepared to furnish an easy and rational solution of the matter; but as that would take from these worthy officials—these inveterate free-trading red-tapists—the merit of an explanation, it is only fair to afford them the opportunity, if practicable, of entire escape from the dilemma in which they seem to be fixed.

But those honourable gentlemen, and their colleagues, in and out of Parliament, will, perhaps, oblige the world with an answer to another short inquiry which I will make. Between the 18th April and the 5th June—a short seven weeks—there was entered for home consumption the quantity of 13,187 tons of copper ore, the duty upon which, according to the average paid in the last five years on copper ore, and still the legal rate, would have amounted to 14,835*l.*; but I believe this large quantity has been admitted on payment of 659*l.*—making a difference of 14,176*l.* in seven weeks, or something more than 2000*l.* a week loss to the revenue. It is quite cheering to know that our finances are in so flourishing a state, as to make a diminution in the receipts of customs upon one article of importation, to the extent of 2000*l.* a week for many successive weeks, an object of no consideration. Let me, however, close this long letter, by asking her Majesty's Ministers, through your columns, a few questions.

1. Is there an Act of Parliament authorising this remission of duty?
2. If there be no law to sanction such a proceeding, by what authority, and on what grounds, has such a measure been adopted, in violation of existing statutes?
3. In admitting to entry at the Customs, for a payment of 659*l.*, commodities upon which the existing law calls for a payment of above 14,000*l.*, what precautions have been taken to prevent frauds upon the revenue?
4. Have the customary bonds, with sufficient sureties, been taken from the importers, for the fulfilment, in certain contingencies, of the requisite engagements; or, if not, what is the nature of the security, if any, which has been accepted by the authorities, in that respect?
5. As copper ores pay various rates of duty, according to their several degrees of produce or richness, have the constituted authorities, in charge of the revenue, taken the usual and proper precautions, by having assays of such ores made, by persons officially employed by them, in order to ascertain correctly the several degrees of the produce, or richness, of the respective parcels of ore imported and admitted to entry, from the 18th April to the present time, in order to afford due and efficient protection to the revenue for the collection of the duties payable by law upon such ores? And if not, why not, and how otherwise?

Let me add one other question, and that of vast moment, in a national point of view: If the present, or proposed, policy, with respect to copper ores, be persevered in—if the copper miners of England be, as they will in that case be, ruined—and if the thousands of mining labourers be, as they will be, reduced to a state of absolute starvation—who, then, is to answer for the peace of those districts?—PUBLIUS: *London, July* 19.

THE COPPER TRADE.

SIR,—I beg to call your attention to the leading article in your Journal of the 24th December, 1836; the perusal of which, and other similar articles, perhaps led to the formation of the English Copper Miners' Company, the fate of which is but too well known; and I advise you to pause ere you recommend the formation of another company for the purpose of smelting. The high prices given for black tin, in 1836, were given out of the smelters' pockets in a ruinous competition, and not warranted by the state of the markets for white tin; the present price of tin and copper may be less than the markets warrant; but it is, in my opinion, more than would be realised if every mine had the means of smelting its ores, and bringing it into the market at this critical juncture.

The standard of copper ore last week shows what may be done by injudicious meddling, and that bad is sometimes better left alone. The complaints about the selling of the stock of the Copper Miners' Company at such ruinously low prices, show that, where sales *must* be effected, the price *must* be low; and no article is worth more than it will bring in the market, unless you have the means of storing it; and who can afford to store copper and tin *now*, at the full price which it usually brings.

Cornwall, July 18. A CORNISH MINER.

ON THE PHENOMENA ATTENDING THE COOLING OF REFINED SILVER, AND ON THE ESCAPE OF OXYGEN GAS THEREFROM.

SIR,—I have long had doubts, as well as your valued and practical correspondent, Mr. Stagg, of Holywell (see *Mining Journal*, 15th July last), whether the cause assigned for the *sprouting of silver* has been of itself sufficiently satisfactory. I have seen large cakes of unquestionably well-refined silver, exhibiting merely the slightest appearances of *volcanic eruptions*, and other cakes, apparently under precisely like treatment, presenting to view the appearances of the mountains of Etna and Vesuvius in splendid miniature grandeur. The cause assigned for this appearance is, that fluid silver, at a certain high temperature, is oxidised; and that, at a lower temperature, although yet fluid, it deoxidises itself; and that, in the attempts of the gas to escape, the appearances in question are produced. More attentive observations of the phenomena are yet desirable. At the commencement of the phenomenon, under favourable circumstances of a gradual cooling, is observed a small cloudy-looking speck on the otherwise most brilliant, mirror-like surface of the fluid silver; and this almost immediately is seen to elevate itself slightly above the general level, and often to run, as it were, along the surface in a curved or irregular line for some distance from the spot where it commenced, leaving in its track a perfect little ridge of mountains. If cracks are formed in the plate of silver, the cooling may be supposed to have been too rapid to produce the pleasing appearances just mentioned. In this little ridge—generally at one or more of its highest points—fluid silver is next observed to issue forth, and not quietly overflowing its sides, but bubbling up like water at a spring-head. The fluid silver, having flowed down the sides for some distance, is then consolidated; and by the continual flowing of the fluid from the same point, and by its subsequent consolidation, a little mountain is gradually formed—sometimes of a considerable height, and of a most beautiful appearance. After some considerable elevation has been obtained, the original point of discharge will often suddenly become, as it were, closed up, when another point—sometimes more than one—will open in the side of the little mountain, and discharge a bubbling stream that runs down the mountain slope, like *lava* is described to flow; and, consolidating at the sides of the stream as it onwards flows, will form a channel for its more fluid parts, carrying the molten silver to the foot of the mountain; and then, often spreading itself into many streamlets, forms the exact appearance of the *deltas* of rivers of the geologist in surpassing beauty. Often the summits of the several little mountains will subside, or sink in; and then *craters*, like those observed in volcanic countries, are formed of differing width and depth. I know of no phenomena exhibiting more truly, both in the active and in the passive state, the majestic appearances of the volcanic mountain—appearances regarded by most of us as among those of Nature's most sublime and grandest spectacles. Sometimes, from the brilliant surface of the cake of silver, trunks and branches will sprout up, as it were, of a winter's tree, clad with snow, ramifying in different directions; and this arborescent appearance is indeed most beautiful. The above comparatively calm procedure is often displaced for one of considerable agitation and confusion. This latter represents the destructive phenomenon of the earthquake; and, probably, both the one and the other—that in the refinery of the smelting-house, and that on the world's wide plain—have one and the same cause in common.

I think the phenomena to be worthy of more scientific attention—not, perhaps, as actually necessary to the scientific and practical assayer and refiner, in an economic point of view—although, I doubt not but, as with every other requirement of knowledge, that a more perfect knowledge of the *modus operandi*, or *rationale*, of the procedure could be brought practically and beneficially to bear fruits of value in regulating some of the manipulations of this important branch of business. Your correspondent, Mr. Staggs, doubts whether there be any absorption of oxygen gas; and supports his view by an experiment—an experiment to me far from being satisfactory; much more so from being conclusive on the point; but your space, and my occupation, will not now allow the opening of an argumentative discussion. Perhaps you will allow this on some future occasion. Let me, however, state, if the points of the little mountains, and the extreme ramified branches of the metallic tree, be carefully examined with a microscope, in almost every case, where the formation has been going on calmly, that a small open point will be observed, like to one made with a minute needle; and further, that, by *anatomical dissection* of the branch, &c., this point will be found to be connected with a little *cannula*, or small pipe, running down and branching off into the metallic mass. This looks to me like an escape way, or air-shaft, of some kind or other.

Again, I have observed, that the fluid metal does not quietly flow, but bubbles. Now, the cooling process generally goes on slowly, equably, and quietly; and if this cooling alone were the cause of the phenomenon, the effect following should also go on equally calmly. We should have no bubbling—for bubbling I presume to be caused by the power (whatever it may be) that is acting on any fluid, to be momentarily changing and unequal in the intensity of its action. We should, therefore, have the fluid metal in motion, like gently flowing water escaping from the basin of a fountain—not like it appears bubbling and spouting at the fountain's head itself. Crystallisation may cause a disturbance of this quietude of action, but crystallisation follows the cooling process, although not necessarily simultaneously with it; and it may occasion, or assist in causing, the violent projection, sometimes in every direction, of the fluid metal; but the fluid metal bubbles when there is no violent projection, and there must be some permanent and constantly acting cause for this. I am not prepared to admit, that the effects of cooling alone, the escape of gas alone, or crystallisation, or contraction, are separately sufficient to account for the appearances described. I am inclined to regard the phenomenon as having a compound origin; however, that sometimes one disturbing influence may take the ascendency, and sometimes another—but that the general result is produced by, and is the effect of, more acting causes than one.

Battersea, July 18. JOHN MULLINS.

STEAM BORING MACHINE.

SIR,—The description of Mr. Gard's boring machine reminds me of the account of a similar machine, which I got from Mr. Taylor, at the Burdwan Coal Mines (India), in 1838, and which, he said, *had been very successfully used by the Chinese*, whether with wind or water-power I cannot tell; but, with the exception of steam, it corresponded with that of Mr. Gard's. Is it possible that Mr. Gard has imported his invention?

Cornwall, July 18. J. B. WILKIN.

COPPER SHEATHING.

SIR,—In answer to the letter of Mr. Prideaux, in last week's Journal, on the wear and waste of copper sheathing, allow me to inform him, through your valuable columns, what my experience has taught:—That, in the treatment of the sulphurets of copper, there should be one calcining, one roasting, one smelting, and one refining—four operations in all; and that care be taken that no iron tools be used, except the ladles for the refining process. The carbonates of copper require only two operations—smelting and refining; but if copper pyrites be mixed with the carbonate, it will require three operations, instead of two. By attention to these operations, all foreign matter will be disengaged. The production of good malleable and pure copper depends on the refiner: the copper is brittle before, and should be stirred with a wooden rod. It requires considerable care to keep the metal to a proper heat until the moulding is finished, to give it due ductility, and make it suitable for the demands of commerce. In general, most operators go too far in the refinery, which renders the metal fibrous, and the result is serious lamination on one side of the sheet. If the copper ore is properly treated in the above operations, this metal is decidedly the best for ship's bottoms. The per centage of copper is also much increased by careful treatment, and the scoria comes out cleaner.

Swansea, July 19. A SMELTER & REFINER.

COPPER SMELTING.

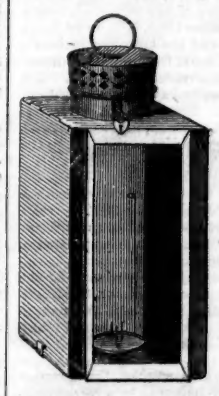
SIR,—In your paper of the 15th inst., I observed an article, under the head of Original Correspondence, in reference to copper smelting, and the quality of copper in general, as it is now produced. In his remarks, the writer complains, or seems disappointed, that no reply to his former article had been given, especially as the interests of so many parties are involved in the question under consideration. It may sound very well in the ears of theoretical men, to hear the practical smelter blamed for the non-publication of his experience; but I think a little reflection and impartial inquiry will go far enough to show, that scientific men themselves are culpable in withholding from the smelter that which they know, however little it may be, if it will aid in arriving at the truth. The writer wishes for information from the practical man, in order to reason upon it. That may be all very well, and very necessary; but, I think, he has not adopted the best means of calling forth the required facts from the smelter. The most judicious way, in my opinion, would be for the writer of the article alluded to, first to give the smelter the benefit of that which he knows by chemical investigation; and then, with more confidence, and with a fair claim, he might look for facts, which are made known only in practical operations. Such information from the chemist might prove beneficial, in many respects, to the smelter, and would, no doubt, be the means of laying him under a double obligation of furnishing the scientific man with many valuable facts, in reference to copper and copper smelting.

July 19. A SMELTER.

SAFETY MINING LANTHORN.

SIR,—Knowing that your Journal has a wide circulation through the several mining districts, I shall esteem it a favour if you can accommodate this communication with a place in your columns. After you have perused my remarks, you will at once see that I am not influenced by any selfish or pecuniary motives. It is a well-known fact, that accidents are frequently happening from the explosion of the inflammable gas which is found in most coal-pits: this gas is either sulphuretted hydrogen or carburetted hydrogen; it is called by the miners "sulphur," or "fire-damp." This gas issues through fissures in the coal seams into the workings of the mine; oftimes, it comes out of cracks in the roof, as was the case at Wednesbury, last week. Since it has been fully proved, by *lamentable experience*, that naked flame will instantly explode this gas, and cause it to expand with much greater force than even gunpowder, it becomes a matter of great importance to devise a means of preventing these terrible explosions, and yet to afford the miner sufficient light for carrying on his dreary underground labours. This can only be effected by furnishing him with a lighting apparatus, which shall afford a good light, and also be secured against exploding any gas that he may meet with. I shall now proceed to give a description of my safety mining lanthorn, which I recommend as possessing decided advantages over any species of safety-lamp in present use. The Davy lamp has found most favour with miners; but is not at all generally used—the objection to it being the poor light it affords. Now, seeing that gas may unexpectedly issue from any part of the mine, and that if it meet with any exposed light it will inevitably explode, the advisability of the miner always working with a safety light, so as to be prepared against danger, is strikingly apparent. The present very general system of trying a safety-lamp before work, and then proceeding to work with naked candles, is, therefore, extremely dangerous. What precaution is there taken against the possible appearance of sulphur? Since, then, there is a possibility of danger at any moment, how unwise is it to sanction the use of naked lights, whether oil or candles? The safety-lanthorn was invented by me in May last, for the purpose of providing the miner with a good, simple, and perfectly safe light. The objections to the safety-lamp will not apply to this; it is, therefore, my hope that the use of safety lights may become more general, and thereby the chances of explosion much diminished.

The annexed drawing is a representation of the safety-lanthorn:—It is of a square form, and is adapted to burn composition candles that require no snuffing. The same principles can, however, be applied to oil lamps, if any party prefer oil to candles. The front is made of strong glass; the back, of polished tin—the two sides of wire gauze, soldered to the framing, having 900 apertures in a square inch of surface. It will do coarser: but the size stated is safest. Over the wire gauze sides are fixed covers of tin, hinged to the top of the lanthorn, which entirely cover the sides, and are kept fast by a small hasp at the bottom. The lower edge of each tin coverside is bent inwards to rest against the framing—so that the tin plate may be kept at a distance of $\frac{1}{4}$ in. from the wire gauze. Sufficient space is thus provided to allow of the passage of air for the supply of the light.—These tin coversides are useful to protect the wire gauze from injury and dirt, as well as to stop any current, or "blower," of gas from blowing out the light. No direct current of wind can have any effect upon the light, because there is no admission into the lanthorn but obliquely at each corner. The candle is held between four short wires, soldered in the dish of a moveable socket, which fits into a socket soldered to the bottom; this candle socket is useful for retaining any waste fat that may run down; it can be lifted out by the wire handle, and cleaned, when necessary. The inside of the lanthorn is thus kept quite clean. The candle is put in through the neck of the lanthorn, upon which a hinged lid fits down tightly. The lid is pierced with two rows of holes, through which the heated air and smoke escape; and to the top is fixed a large ring, by which the lanthorn is carried and hung up. This ring is kept cool by a simple, but effective, contrivance. A piece of tin, bent into the form of an inverted cone, is soldered inside the lid, which causes the hot ascending air to flow towards the sides, where it immediately escapes through the openings. To prevent any inflammable gas entering through the lid, a circular disc of wire gauze is soldered inside the rim of the lid—so that no gas can enter but through the wire gauze; this wire gauze will never become red-hot, so that no explosion can possibly occur. The size of lanthorns I have had made is about 5 in. square, and 12 in. high; other parts in proportion. The inside of the tin coversides, and the outside of the lanthorn, are japanned of any dark colour.



An entire novelty in safety-lamps is the introduction into mines of the lock-up system, adopted with so much safety in the signal-lamps used at sea. By locking each lamp in use, and entrusting the key to the care of some competent, responsible person, the means of rendering every lamp free from undue interference is obtained. The fact, that many accidents have occurred solely from the incautious opening of safety-lamps, at once proves the value of such a system, and the necessity for its introduction into coal-pits. Let a "doggy" be appointed in each pit to serve out safety-lanthorns, to keep them all locked, to examine them regularly, and to keep a stock of candles for the supply of the lanthorns. He must be stationed in a secure part of the mine, and the miners must each apply to him for a fresh candle when required. Let it be a rule, that if any miner wilfully damage his lanthorn, he be immediately discharged. The superintendent of the safety-lanthorns will alone keep the key; by using similar padlocks, one key will unlock every lanthorn. The lanthorns must, on no account, be opened in the workings of the mine, where there is any possibility of gas accumulating. The drawing shows how the padlock is fixed to the lanthorn. The lid has a hasp fastened on it, which falls down over a staple, fixed on the neck, through which staple the bow of the padlock is passed; then, by no fair play, can admission be gained to the interior, until the padlock is unlocked.

Suppose, now, that naked candles are only used in the perfectly ventilated parts of a mine—that in every other part the miners use safety-lanthorns, and that the lock-up system is thoroughly carried out, there will be very little chance of any explosion occurring. The lanthorn affords a capital light—much superior to any naked lamp, or candle—so that no miner can, with any reason, and in his sober senses, object to use it.

To induce mineowners and managers to give this safety-lanthorn a trial, it may be observed, that its construction is very simple, and its cost trifling. The invention is not patented, and is, consequently, open to every one. Any person is at liberty to construct, or cause to be constructed, these lanthorns. Allow me to state, that I do not manufacture them—my only connection with them is as inventor and recommender. I merely desire to bring the subject prominently before mineowners and others, that some persons, at least, may be induced to give the system a trial. I am also quite unconnected with the mining interest myself, and, therefore, can have no sinister object in bringing forward these remarks. JOHN CRANE.

Cannon-street, Birmingham, July 14.

SPONTANEOUS GAS COMPANY.

SIR,—Can you, or any of your friends, inform me whether there exists in the north-east of England, among the mines in the colliery districts, a "Spontaneous Gas Company;" or if there ever did exist such a company, either there or elsewhere?

By spontaneous gas, I mean self-generated gas, proceeding out of the deep mines in the above-mentioned neighbourhood. The various streams of such gas are collected together, and made use of (such is my impression) for the same purposes, and in the same manner, as ordinary manufactured gas. An answer in your next publication will greatly oblige.

Manchester, July 20. W. D. C.

[We certainly never heard of any company for collecting the gas which flows spontaneously from the coal mines. We believe, in one or two instances, in the great northern coal-field, it is employed to light the works of the mine whence it issues, and has been thus burning for years, without intermission.]

STEAM ON TURNPIKE ROADS.

Sir,—I am glad to learn there is every probability that Sir James Anderson's steam-carriage will be tried in the course of a few weeks on the Hammersmith-road, as I understand more than one-fourth of the proposed 500 10*l.* loan shares are agreed to be taken. Sir James states, in his prospectus, that he has succeeded in obviating the several reasonable objections which have, more or less, attended every attempt that has hitherto been made—viz.: *noise, and the appearance of steam and fire*—and that he has so arranged the machinery as to increase or diminish traction, and thereby enable him to ascend or descend any hills on the ordinary turnpike roads with perfect safety—and that he has no doubt of being able to convey passengers and goods at the reasonable speed of from 10 to 12 miles per hour, *at one-half the charges made by railway companies*, and still realise a large profit. Now, if this be accomplished (and I see no reason to doubt it), I think the public will be greatly indebted to Sir James for his praiseworthy exertions to accomplish what must (if he so succeeds) be deemed a great *national convenience and advantage*, and that without materially injuring the existing railways, but generally quite the reverse, preventing the necessity of making branch railways at a cost of 8000*l.* or 10,000*l.* a mile, scarcely any of which but are worked at a considerable loss to the parent line.

Sir Henry Parnel, and Thomas Telford, Esq., admitted, that if a rail was laid on turnpike roads with the *same undulations*, that then one horse would be equal to five or six; and, as the difference in traction between wood and iron is about 20 per cent. in favour of the latter, then, according to their testimony, it is reasonable to conclude that even with horses the public might be conveyed with large profit at 1d. or 1½d. a mile, and by steam at ½d. and ¾d. per. mile.

I have, therefore, long held, and still maintain, that steam on the common roads may be made available with success *on good firmly macadamised roads*, but with indisputable success, if two timber tracks, say half a yard wide, on the plan and principle of wood paving, or about 8 or 9 feet of the middle of the road be laid with broken granite, or other hard stone, combined with an anti-absorbent concrete, which may be done for 300*l.* or 400*l.* per mile, *so as to be very durable*, especially as the tire of the wheels are from 5 to 6 inches wide. Such an arrangement would, in my opinion, render success positively and absolutely certain.

London, July 17. Thomas Motley.

IRON FROM CHINA.

Sir,—About the beginning of this month, a paragraph appeared in a morning paper, announcing the arrival of the ship *Ann* in the docks, from Shanghae, and that a portion of her cargo consisted of "100 tons weight of Porto Novo iron (so called in the official return), consigned to order." The *gobemouche* who discovered this mare's nest adds—"This large importation of iron from China is very remarkable, and of much interest."

In your paper of the 15th inst., Mr. William Radley, Ch.E., has undertaken to enlighten the public upon this mysterious and "interesting" subject; and, as he has brought my name forward in connection with this iron, I consider it my duty to make some remarks in correction of Mr. Radley's mistakes and misrepresentations.

I must premise by stating, that this gentleman gave me the unsolicited honour of his acquaintance, by addressing a letter to me, at a time when I was engaged in some metallurgic operations connected with the patent to which his letter alludes. It required no extraordinary penetration to take the measure of Mr. Radley's qualifications as a propounder of new discoveries in metallurgy; and to my failure in encouraging his overtures towards farther acquaintance, I conclude that I am indebted for his sneer at my efforts in this line. Mr. Radley's communication to you is full of errors. As he had an opportunity, during his brief intercourse with me, of making inquiries, and obtaining correct information upon the subject of the iron he now undertakes to give your readers an account of, his errors cannot be characterised as mistakes—I can give them no other name than wilful misrepresentations. He tells you that "the iron in question is a coal-smelted iron, from magnetic hematite, on the Malabar coast of India, called Porto Novo." This sentence, to say nothing of its grammatical construction, contains three gross errors. The iron brought to England by the *Ann* is not smelted with coal—taking coal in its ordinary acceptation to mean pit-coal; the only fuel used for smelting at the works where this iron was made is wood charcoal; the ore from which the iron was smelted was not a magnetic hematite, for the sufficient reason, that no such ore of iron is known to exist; and Porto Novo, so far from being a synonyme for the Malabar coast, as a reader of Mr. Radley's letter would infer, is a seaport town on the Coromandel coast. Mr. Radley next speaks of "the price at which this iron can be offered in the British market—*i. e.*, port of London." Upon this point he speaks in a tone of authority; and he states, without the slightest hesitation, that the value, at Porto Novo, is not less than 5*l.* per ton, and the freight from 3*l.* 10s. to 4*l.* per ton.

I am quite ready to admit, that the *value* of this iron on the spot where it is made is not less than 5*l.* a ton; but the value of an article is not a convertible term for its *cost*: it is evident that Mr. Radley means here to speak of the cost; and as it is impossible that he should possess any data for estimating that cost, it is clear that any assertion of his upon the subject must be worthless. Your readers will judge of the value of this gentleman's testimony when they learn, after reading his unqualified assertion, that the freight upon this iron was from 3*l.* 10s. to 4*l.* a ton, that the iron was brought to this country, as numerous other consignments of the same article have been, freight free; and this, not from any favour to the owners of the iron, but simply because the owners of ships taking cotton from India to China, and bringing tea from China to England, are glad to take Indian iron as ballast, instead of shipping, and paying for, basaltic rock at Bombay, sand from the beach at Madras, or granite from China. The rest of Mr. Radley's letter is simply a spiteful fling at myself, and at "the steel making processes patented by Mr. Heath," as if Mr. Radley were acquainted with their merits, and was qualified to form a judgment upon them.

This gentleman probably does not know, that manufacturers of cast-steel in this country have paid me the compliment of adopting the use of one of these processes almost universally in their business, but that they decline to make me the very moderate remuneration which I asked for the use of the process. It is true that I have gone to the expense of a patent, to endeavour to secure the fruits of what all who know the process allow to be a most valuable discovery; it is true, that the law tells me that I have a remedy against piracy of my patent; and it is true, that I have endeavoured to avail myself of this remedy; and that, having succeeded so far as to get the verdict of a jury in my favour, I have been deprived of the benefit of that verdict by a decision of the judges who administer law in this country, to the effect, that the party whom I prosecuted for an infringement of my patent had no *intention* to do so, after a jury had found that he had committed the act. This is a matter in which the public has benefitted for some years past, to the amount of not less than 100,000*l.* a year; while all I have got by my discovery has been the burthen of three actions in our courts of law. The decision of the Exchequer Court, however, has not settled the question as to the piracy of my patent, and it is not impossible that the justice of the case may yet prevail, late though the retribution may be.

Before I conclude, I trust you will bear with me, while I make use of the communication of Mr. Radley, as a peg whereon to hang a brief notice of a subject, which is assuredly destined, at no very distant day, to attract a large portion of public attention.

The subject I allude to is the association who own the works at which the iron, lately imported by the *Ann*, was produced. This association was formed by some private gentlemen at Madras, in conjunction with myself, about 15 years ago. I will not trouble you with any details of the difficulties with which the stout-hearted men associated with me have had to struggle during this long period; these difficulties have arisen entirely from the limited nature of the original association, and from what is so common in all new and untried projects—the omission to provide a sufficient reserve fund, in the first instance, to sustain operations at any period of unforeseen check requiring further outlay to surmount it. Numerous as have been the obstacles in the path of the Indian Iron and Steel Company, they have been gradually surmounted; and the question of the extent and profitable result of their operations is now merely one of the application of capital.

Since the commencement of their operations, several thousand tons of their produce have reached this country, and the greatest part of it has been brought freight free. On its first introduction, it had to encounter the opposition of hostile interests, and the usual prejudices against a new article. Time has, in this instance, produced its usual effects; large quantities of Indian iron have been worked up by Mr. William Crawshay, by the Lowmoor Company, by Mr. G. B. Thorneycroft, and others; and it is now admitted, that the very best iron that is made in England has been manufactured from a mixture of Indian pig-iron, with certain descriptions of English metal. The demand for this iron at present far exceeds the possible supply with the means of the existing association; and the cargoes of the *Ann*, and of other ships, now on their way home, are all bespoke before arrival. The bar-iron made at the works in India finds a ready sale in the local markets at the highest price of Swedish iron, and to the full extent of the capabilities of the present works. The introduction of railways into India, which cannot be long delayed, will open a vent for Indian iron to which no limit can be now assigned; and, as the cost of production in that country will defy competition from any other quarter, there can be no doubt that the iron required to make Indian railways, will be produced in India.

The operations required for this object are, of course, far beyond the means of an association of such a limited nature as the Indian Iron and Steel Company; but when the times appear propitious for such an undertaking, the members of it will be quite prepared to admit the public to a participation, on liberal terms, in the results of the most promising investment that has ever been offered for British capital. J. M. Heath.

Winchester-buildings, July 21.

LITERARY NOTICE.

Fish in Rivers and Streams—A Treatise on the Production and Management of Fish in Fresh Waters by Artificial Spawning, Breeding, and Rearing; showing also the Cause of the Depletion of all Rivers and Streams. By Gottlieb Boccius. London: John Van Voorst, Paternoster-row.

To the proprietors of streams, rivers, or ornamental waters, as well as to the lover of the piscatorial art, this little treatise will prove of much interest; it is from the pen of a gentleman, who has devoted nearly 40 years to the subject, and the results of whose experience are of a most important nature. He truly observes—"There is no animal in the world like the fish in its power of multiplying its own species, but fresh water requires care and protection; they must be managed as well as protected, and they must be managed and protected on sound principles, or all rivers and streams, running through populous countries, will, in no long time, be wholly depopulated of their finny tribes. How and why I will endeavour to show from practical experience, trusting that from the number of years I have practised this art, with perfect success, will warrant me in showing how rivers and streams may be restored to their former productiveness, upon simple, cheap, and unerring principles—so that there never need be a scanty supply of fresh water fish as an article of food." In this treatise, the author shows how a changed condition of the water from land drainage and sewage destroys the spawn, yet gives support to the perfect fish—describes the chemical action of the water, and enters into full description of the mechanical means necessary for preventing the evils he describes. The great object appears to be, to call the attention of the proprietors of fisheries and streams, and even Government, to the fact that, with proper scientific treatment of the finny tribe, not only might an enormous quantity of fresh-water fish be sent to our markets, thus forming a large and wholesome addition to the food of the people, and bringing a large income to the proprietors, but a great amount of national revenue might be obtained from our large public rivers. Most lovers of natural history will, we think, find a novel treat in these pages, which are elegantly printed, and the work "got up" in the best manner. It is dedicated to Lord Morpeth.

Extraordinary Surgical Operation.—The frequency of accidents, and the amount of disease, which befal our miners, always claim consideration; and our attention having been directed to a disease to which miners are particularly subject, from an operation of a very extraordinary nature, performed by Mr. Thomas Wakley, the son of the Member for Finsbury, with exquisite skill and ability at the Royal Free Hospital, London, we think it desirable to notice the case. This new operation on the foot, consisting of the excision of the ankle-joint, and the entire removal of the diseased bones—namely: the *os calcis* and *astragalus*—is the only case on record of the entire removal of these two important bones of the foot. The patient was admitted into the Royal Free Hospital under the care of Mr. Wakley. The failing health of the man, and the positively ascertained disease of the two bones, rendering an operation of some kind imperative, it became a subject for consultation to determine what its nature should be. The question, either to remove the leg below the knee, or at the ankle-joint, was discussed. Mr. Wakley decided upon the hitherto unattempted removal of the *os calcis* and *astragalus*—namely: to dissect out the diseased bones. The patient being under the influence of chloroform, the operation was most ably and successfully performed by Mr. Wakley, in the presence of Mr. Erasmus Wilson and Mr. Gay, the eminent surgeons. During the few minutes the operation occupied, the patient did not manifest the slightest symptom of pain or uneasiness; but who, from being pale and emaciated, has now become a stout man, in perfect health, and free from disease. The result of this operation will, it is hoped, justify the universal adaptation in similar cases; for miners, of all others, are especially subject to accident and disease from the nature of their occupation; and for this magnificent improvement in the practice of surgery, society owes a lasting debt of gratitude to men like Mr. Wakley, who, by patient study, practice, and dexterity, are thus enabled to relieve the human frame from such an immense amount of suffering. The successful termination of this operation has advanced another gentleman to a rank in his profession, destined to fill the place of the late eminent surgeon, Robert Liston, Esq.

Experiments with Chloroform.—In the *Lancet*, Mr Nunneley, of Leeds, states that chloroform and other anæsthetic agents can, he believes, be applied locally to a part to produce local insensibility to pain, the brain being unaffected, consciousness being retained, and the limbs and other parts not being subjected to the action of the anæsthetic agent, retaining their usual anæsthetic conditon. His opinions regarding the supposed value and safety of this new mode of administering anæsthetic agents had been formed by Mr. Nunneley on the results of experiments. By the local application of chloroform to the limbs of frogs and toads, and the hind legs of rabbits, he had rendered these parts anæsthetic, and he obtained (he states) similar results in the human subject from keeping his finger immersed in anæsthetic fluids for half an hour or an hour. In one case, where the operation for artificial pupil was to be undergone, he had (he mentions) rendered the parts nearly insensible by applying to the eye for 20 minutes previously a small quantity of the vapour of chloroform.

Ingenuity of Science.—Who would have imagined, when gun-cotton was produced by M. Schönbein, and the world was threatened with destruction by being blown up by this terrible explosive material, that within a few months it should be discovered to be an excellent styptic for dressing cuts and wounds? But so it is. Dissolved in ether, and applied to the severest cut, it forms an adhesive covering of singular closeness and adhesiveness, protects the wound, and excludes atmospheric air, or any irritating matter, so that the process of healing is carried on speedily and effectually; and when all is well, the "protectionist," having done its duty, is removed. So also has Dr. Simpson, of Edinburgh, we are informed, similarly applied chloroform and gutta percha! This mixture, in a liquid condition, at about the consistency of fine honey, is kept in a phial or bottle, and when an accident of the kind to which we have referred occurs, it is simply poured upon the wound; the chloroform instantly evaporates, and the gutta percha remains a perfect, flexible, second skin, over the injured part, preserving it for weeks if necessary, without the need of dressing, bandages, or any other appliance, till there is no more occasion for this admirable agent. When we call to mind how much human pain will thus be alleviated, how many cures effected where hitherto there have been danger and uncertainty, and how a number of surgical operations will be simplified, it may not be considered too much to rank such inventions among the most valuable that could be discovered and applied for the benefit of mankind.—*Literary Gazette.*

Meeting of the British Association.—Wednesday, the 9th of August next, is fixed for the 18th meeting of the "British Association for the Advancement of Science;" and the place of meeting this year will be the town and seaport of Swansea, famous for its copper smelting furnaces and neighbouring oyster beds. A liberal subscription has been entered into by the people of the town and surrounding country, who look forward with considerable expectation to this meeting of *savans*. Various sections in the Royal Institution, and other buildings, are in course of being fitted up for the occasion, and a large and distinguished company of visitors is expected to be present. Preparations are actively in progress for their reception, and the following among others have announced their intention of being present:—The Marquis of Northampton, President of the British Association, Earl of Rosse, Bishop of St. David's, Sir Charles Lemon, Sir Thomas Acland, Sir R. H. Inglis, Sir W. Trevelyan, Sir John Lubbock, Sir J. Stephenson, Professor Graham, Professor Christie, Professor Miller, Professor Phillips, Professor Forbes, and Professor Grove; Dr. Lindley, Dr. Buckland, Dr. Carpenter, Dr. Pye Smith, Dr. Smethurst, Mr. Airey, the Astronomer Royal, Colonel York, Dr. Sheepshanks, *cum multis aliis*. It is expected also that the Chevalier Bunsen, M. Guizot, and other distinguished foreigners will be present; but, as yet, their determination has not been announced.

Letters Patent.—A Parliamentary paper, lately published, shows that the total number of letters patent for inventions granted in the United Kingdom in 1847, amounted to 740, against 761 in 1846, and the total fees received thereon to 32,997*l.*, against 34,103*l.* in the preceding year. Of this sum, 20,518*l.* was paid over to the Consolidated Fund, and 9830*l.* to the several offices entitled to receive the same.

The Ayrshire Iron Company's Lands—Heritable Property.—On Wednesday afternoon, the Blair Iron-Works, near Dalry, Ayrshire, with the valuable mineral fields held in lease, belonging to the sequestrated estate of the Ayrshire Iron Company, were again set up for sale in the Royal Exchange sale-rooms, at the reduced upset price of 58,000*l.*; also the beautiful estate of Pitcon, in the same neighbourhood, at 37,100*l.*; but Mr. Bogle, who set them up, received no offers, and the sales were farther adjourned. The exposures of heritable property by auction in these rooms, on the same day, were numerous beyond precedent—there being two at one o'clock, and 11 at two o'clock, out of 14 advertised.—*Glasgow Courier.*

COLLEGE OF CIVIL ENGINEERS—PUTNEY.

The anniversary meeting for the distribution of prizes to those students whose proficiency during the past year in their several branches of study had entitled them to such rewards was held on Tuesday last, at the college. The weather was too inviting not to induce many of the friends of the institution to leave the heat of London and recreate themselves on the cool and verdant banks of the Thames, which condescendingly laves, with its dark and dirty waters, the pleasant grounds of the college. Nobles, knights, and ladies fair honoured the proceedings with their presence; but this has been usual since the foundation of the college, and no especial singularity is, therefore, connected with the circumstance. The meeting this year, however, was distinguished by the presence of that excellent and inestimable member of the Royal Family, that Mæcenas of all that is honourable and useful to the country—his Royal Highness the Duke of Cambridge. It is gratifying at once to learn that the College of Engineers is taking such a position as to invite the patronage of the Royal Duke, and that his Royal Highness has recovered sufficient health to enable him to give countenance, by his presence, to the routine of study peculiar to this school of scientific instruction. Amongst the visitors present were his Grace the Duke of Buccleuch (president), the Bishop of London, the Earl of Devon, Lord William Fitzroy, Sir C. Sullivan, Major Oliphant, Major-General Sir C. Pasley, Colonel Sykes, Major S. Clerke, the Hon. and Rev. C. L. Courtenay, the Hon. F. Tollemache, M.P., Captain Moorsom, Mr. Rennie, &c. Letters of regret were received from the following noblemen and gentlemen who, from unavoidable circumstances, were prevented from attending:—The Duke of Grafton, the Marquis of Northampton, the Earl of Burlington, Lord F. Somerset, Lord W. Somerset, Sir J. Lushington, General Galloway, the Hon. Colonel North, the Lord Mayor, W. H. P. Carew, M.P., Sir J. M'Gregor, Sir H. Douglas, the Dean of Westminster, &c.

His Grace the Duke of Buccleuch having taken the chair, the Rev. the Principal was called upon to lay before the meeting the usual annual report on the general condition and prosperity of the college, and the conduct and proficiency of the students. The rev. gentleman stated that certain plans were in progress for the improvement of the college system. This improvement consists in the addition of classes on metallurgy, and of general engineering for Indian officers. These are important subjects in the system of education pursued at the college, and as such the Principal especially urged upon the gentlemen present connected with India the vast advantages to be derived by the efficient education of Indian officers, both civil and military, in engineering science. The plan now in contemplation by the Government afforded the Rev. the Principal the opportunity of holding out to the students a great field for employment in the various branches of their profession—so that, while engaged in the operations which must be carried on in improving the sanatary condition of our large and populous towns, they would be enabled to test the value of the instructions received at the college, and to apply it in a manner likely to promote their own advancement and future reputation.

The several professors then read their reports, and the prizes were distributed as follows:

Mathematics.—Class I. 1st Div. Shearwood, Simpson. 2d Div. Coghlan.—Class II. 1st Div. De Bourbel, Christie, Robertson (Æq.) 2d Div. Goudie, Candy, sen., Candy, jun.—Class III. 1st Div. Riley, Hayton, Blair.

Chemistry and Physics.—Class I. Broadrick, Codrington, Simpson.—Class II. Candy, sen., Candy, jun., Riley.

Geology.—Codrington, Coghlan, Kershaw.

Geodesy.—Class I. Christie, Coghlan, Ackland, Codrington.—Class II. Robertson, Simpson, Shearwood, Woodward.—Class III. Roberts, Kershaw, Cato Sowerby.—Military class. Heathorn, M'Grigor.

Civil Engineering.—Class I. Codrington, Ackland, Biggers, Davidson.—Class II. Kershaw, Cato, Robertson, Roberts.—Class III. Riley, Sowerby, Stewart, Hayton.

Architecture.—Class I. Broadrick, Codrington, Ackland, Biggers.—Class II. Shearwood, Nethersole, Kershaw, Cato.—Class III. Sowerby, Candy, jun.

Machinery.—Class I. Simpson, Broadrick, Whichello, Woodward. Drawings. Christie.—Class II. Cato. Drawings, Cato, Kershaw (Æq.)—Class III. De Quetteville, Hayton (Æq.)—Manipulation. Skinner, Lowe, Nethersole.

Drawing.—(No prize awarded.)

Perspective.—Christie, Woodward.

French.—Class I. Kershaw, De Bourbel.—Class II. Cato, Candy, sen.

German.—Class I. Broadrick, Kershaw (Æq.)—Class II. Candy, sen.

Essay on Water Supply to Towns.—Robertson, Codrington, Simpson (Æq.)

His Grace, the President, then addressed the students, and expressed himself gratified at the improvement that had taken place in the general prosperity of the institution. He particularly enforced upon them the necessity for observing, both within and without the college walls, a demeanour strictly in accordance with the character of gentlemen; as it was only by moral and correct conduct that they could hope to obtain that position in society it should be their ambition at all times to occupy.

The Lord Bishop of London, in a speech of great force, urged upon the students the strict and constant performance of their moral duties. Although living close at hand, his lordship said that he had never before visited the college, for he was not aware that religious instruction formed a part of their training. He had ascertained, however, that they receive sound religious education, from which the best results might be anticipated. With regard to their conduct outside the college walls, he was able to say that it had been at all times as good as could be desired.

The Duke of Cambridge, in a short speech, expressed the gratification he felt in being present on so interesting an occasion.

The Earl of Devon and General Pasley also addressed the meeting.

After the company had left the college hall, some interesting experiments were exhibited in the laboratories, with a magnet of enormous power. The drawings of the students in two large rooms were next inspected. Some of them were extremely good, and showed that the instruction given in this department is of the best kind.

In the machinery department, Baron Von Rathen's model locomotive for common roads, driven by compressed air, and also a new rotary engine were exhibited, both having been constructed in the college workshop. It is very interesting to find that the most recent attempts at invention are practically tested in this institution. After a handsome luncheon to the guests invited, the proceedings terminated with evening prayers in the chapel, which has been much improved since our last visit to the college.

NEW PATENTS.

W. Swain, Pembridge, Hereford, brickmaker, for certain improvements in kilns for burning bricks, tiles, and other earthern substances.

J. L. Lemanaude, Passage Jouffroy, Paris, jeweller, for a new process of applying or fixing letters of metal upon glass, marble, wood, and other substances.

C. Purnell, Liverpool, clockmaker, for certain improved apparatus to be applied to timber-loaded and other vessels laden with materials, the specific gravity of which is lighter than water, preventing the necessity of abandoning them at sea, by ridding them of the superincumbent water, and enabling them thereby to carry sail.

J. Stenson, Northampton, engineer, for improvements in steam-engines and boilers; parts of which improvements are also applicable to other motive machinery.

J. A. Steinkamp, Leicester-street, Leicester-square, Middlesex, gentleman, for improvements in the manufacture of sugar from the cane.

W. E. Newton, Chancery-lane, Middlesex, for certain improvements in machinery for letter-press printing.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

J. E. Smith, and Co., Lawrence-lane, London, shirt collar.

C. Warren, Birmingham, fastener for brooch.

R. Clark and T. Restell, West Strand and York-terrace, Camberwell, press and cullender for vegetables.

F. J. Hartley, Pump-row, Old-street-road, fastener for umbrellas and parasols.

Foster, Porter, and Co., Wood-street, Cheapside, victorine.

T. Homing, Maidstone, shooting-coat and waistcoat combined.

B. Meyers, Crutchedfriars, mitred handle for walking-sticks, umbrellas, canes, &c.

G. J. Mackclean, Lechdale, thrashing machine.

T. Edwards, Birmingham, solid leather cigar [illegible]

G. Unite, Birmingham, slide bolt to secure [illegible]

Weiss and Son, Strand, forceps and scis[illegible]

White and Wells, Nottingham, under[illegible]

Safety from Lightning.—[illegible]restion, for the preservation of life during thun-derstorms, [illegible]am Baggs, in the course of his lectures upon the "Phenom[illegible] delivered at the Polytechnic Institution. "Those (said th[illegible] being drenched by rain, may effectually screen themselv[illegible]ger, when walking through a town, or city, in a thunder-[illegible]ost—as the pipes running under ground must necessarily ca[illegible] thereby save the passer-by from destruction." He challenge[illegible]ny the accuracy of this suggestion.

Railway Companies and the Railway Commissioners.—In the House of Commons, last night, Mr. Labouchere stated, that the Commissioners of Railways, under Mr. Gladstone's Act, were authorised to inquire into the infringement of any acting railway companies. The principle on which they acted was, on receiving a complaint, to send an inspector down to investigate it; and in the event of any valid grounds existing for doing so, to proceed in the ordinary course of law against the company.

Alleged Attempt to Extort Money.—On Thursday, Mr. R. B. Cousins, of 4, Bedford-place, Old Kent-road, was charged before Alderman Gibbs with attempting to extort money from Mr. Joseph Woods, the patentee of the chronometric governor for steam-engines. It appears, that the defendant wrote to plaintiff, stating that he was preparing a small treatise on the causes of the inefficiency of the steam-engine governors; and that, in investigating Mr. Woods's chronometric governor, he felt bound to speak of it in such a manner as would lessen it in value as a commercial speculation; as he wrote, however, only for pecuniary profit, he was willing to suppress it for a valuable consideration.—Mr. Humphreys prosecuted, and contended that the case came within the Act 6th and 7 Vic., c. 96.—Mr. Hobler objected to the jurisdiction of the magistrate; and said, if Mr. Woods felt himself aggrieved, he should proceed by indictment before the grand jury.—Alderman Gibbs said, the intention to raise money was quite evident; but as he could not see that the letter was a libel, or that it contained matter with which he could interfere, he must dismiss the case.

The South-Foreland Lighthouses.—These edifices are now completed, and their appearance reflects credit on all parties concerned in their erection. There are two—the one called the Upper, and the other the Lower South-Foreland Lighthouse. The headland on which they stand is the nearest point in England to the coast of France, the distance being barely 21 miles across the Channel. The upper lighthouse consists of a massive tower (externally octagon, internally circular), the lanthorn of which is about 375 ft. above high-water mark, leaving a perpendicular height of the cliff on which it is situated of about 290 ft. The lanthorn is constructed on a novel principle. It is furnished with 264 mirrors, which are enclosed on the side opposite the sea by six lenses. These mirrors, casting a multitudinous reflection on each other, afford a strong and brilliant light, being clearly visible on the opposite coast, throughout the Downs, Ramsgate, and even Margate, and the greatest portion of the Isle of Thanet. The lamp, which is in the centre of the lanthorn, consists of one large socket, containing four burners; and it supplies itself with oil by means of a kind of clock-work machinery, which, while it pumps up the oil to the wick, also returns the surplus quantity to the reservoir; and in case of any defects, or want of supply, by a small hydraulic balance, strikes a sharp tinkling bell, as a warning to the keeper. The machinery is very simple, at the same time curious. The lanthorn consists of a cupola, the roof and sides of which are composed of neatly wrought-iron frames, apparently light, but sufficiently strong to stand against the tempest. It is enclosed by 48 oblong panes of plate-glass, from 2½ to 4 ft. long. Around the cupola, on the exterior, is a balcony, rendered safe by a castellated parapet, from which, in clear weather, a splendid view is obtained. Passing from the upper lighthouse, about a quarter of a mile easterly, is the lower one, standing on the verge of the cliff. The tower is not so high as the former, neither is it lighted on the same principle. Within the lanthorn are suspended from copper branches 15 Argand lamps, each having a burner of rather large dimensions with a concave reflector of the greatest brilliancy, and about 20 in. in diameter. It appears that it is yet a matter of doubt which system of lighting is preferable, but the Corporation of Trinity are giving each a fair trial.

RIDER'S RAILWAY BRIDGE.—TO RAILWAY COMPANIES.—A PROSPECTUS of the above newly-invented IRON TRUSS RAILWAY BRIDGE will be FORWARDED, and CONTRACTS entered into, or LICENSES GRANTED for its ERECTION, on application to Mr. Moulton, Bradford, Wilts. 46

EUROPEAN GAS COMPANY, 39, Finsbury-circus, London, July 18, 1848.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the proprietors of the EUROPEAN GAS COMPANY will be HELD at the house, or office, of the said company, situate at No. 39, Finsbury-circus, in the city of London, on Thursday, the 3d day of August next, at Two o'clock in the afternoon precisely, to take into consideration the 106th clause of the Deed of Settlement of the said company, and in particular to assent to, or dissent from, the repeal of the said clause, or of so much thereof as relates to a proprietor while he shall be a director, or for one year after he shall cease to be a director, being eligible to any office of profit in the company, or executing any other duties than that of a director in the said company, and receiving any further or other salary or emolument in respect of such office or duties, and to sanction and confirm what has been done by the board of directors, or any meeting of proprietors, in any such appointment or appointments, and any payment of salaries or remunerations to directors so appointed. By order of the board, J. B. GREAVES, Secretary. 47

PATENT FLEXIBLE INDIA-RUBBER PIPES AND TUBING, for Railway Companies, Brewers, Distillers, Fire-Engines, Gas Companies, Gardening and Agricultural purposes, &c. 48

THE PATENT VULCANISED INDIA-RUBBER HOSE-PIPES are made to stand *hot liquor* and *acids*, without injury—do not become *hard* or *stiff* in any temperature (but are always perfectly flexible); and as they require NO APPLICATION of oil or dressing, are particularly well adapted for *Fire Engines, Pumps, Gas, Beer-Engines, Gardens*, and all purposes where a *perfectly Flexible Pipe* is required.

Made all sizes, from ¼-inch bore upwards, and of any length to order.

Vulcanised India Rubber Garden Hose, fitted with brass-taps, Copper branch and Rose's complete, ready to be attached to pumps, water-butts, or cisterns.

Sole manufacturer, JAMES LYNE HANCOCK, Goswell Mews, Goswell-road, London.

N.B.—Vulcanised India-Rubber Washers, of all sizes, for joints of hot-water and steam-pipes, and *Vulcanised Sheet Rubber*, any thickness, for all kinds of joints, and other purposes.

GEOLOGY.—Persons wishing to become ACQUAINTED with this interesting BRANCH OF SCIENCE, will find their STUDIES greatly FACILITATED by means of ELEMENTARY COLLECTIONS, which can be had at TWO, FIVE, TEN, TWENTY, or FIFTY GUINEAS each, arranged and sold by Mr. TENNANT, 149, STRAND, LONDON. 49

A COLLECTION for FIVE GUINEAS, which will illustrate the recent works on Geology, contains 200 specimens, in a mahogany cabinet, with five trays—viz.:

MINERALS which are the components of rocks, or occasionally imbedded in them—Quartz, agate, calcedony, jasper, garnet, zeolite, hornblende, augite, asbestus, felspar, mica, talc, tourmaline, calcareous spar, fluor, selenite, baryta, strontia, salt, sulphur, plumbago, bitumen, &c.

METALLIC ORES.—Iron, manganese, lead, tin, zinc, copper, antimony, silver, gold, platina, &c.

ROCKS.—Granite, gneiss, mica-slate, clay-slate, porphyry, serpentine, sandstones, limestones, basalt, lavas, &c.

FOSSILS from the Llandeilo, Wenlock, Ludlow, Devonian, carboniferous, lias, oolite, wealden, chalk, plastic clay, London-clay, and crag formations, &c.

Mr. TENNANT gives private instructions in Mineralogy, with a view to facilitate the study of Geology, and of the application of Mineral substances in the Arts, illustrated by an extensive collection of specimens, models, &c.

PROFESSIONAL LIFE ASSURANCE COMPANY, Connecting the Clerical, Legal, Military, Naval, and Medical professions, and holding out advantages to the public not hitherto offered by any similar institution.

Incorporated.—Capital £250,000. Established upon the mixed, mutual, and proprietary principle. 50

Rates essentially moderate.—Every description of policy granted. Immediate, survivorship, and deferred annuities; and endowments to widows, children, and others.—Every policy (except only in cases of personation) indisputable.—The assured permitted to go to and reside in Canada, Nova Scotia, New Brunswick, Australasia, Madeira, Cape of Good Hope, and Prince Edward's Island, without additional premium.—Medical men remunerated for their reports.—Loans granted on real or personal security.—One-tenth of the entire profits appropriated for the relief of the assured while living, and of his widow and orphans.—Annuities granted in the event of blindness, insanity, paralysis, accidents, and any other bodily or mental affliction, disabling the parties. Persons of every class and degree admitted to all the advantages of the corporation.—Rates for assuring £100 at the age of 25, 35, 45, and 55, respectively—namely, £1 14s. 6d., £2 5s. 6d., £3 4s. 3d., and £4 18s. 6d.

Prospectuses, with full details, may be had at the office.—Applications requested from parties desirous of becoming agents. EDWARD BAYLIS, Actuary and Secretary.

Offices, 76, Cheapside, London.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY. 51

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and finest pieces of machinery, as for the heaviest bearings of the steam-engine It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

MINING IN FRANCE.—In consequence of the more settled state of the capital, mining operations, and, indeed, nearly every branch of industry in the metallurgic and manufacturing departments are assuming a more cheering aspect than for the last few months. Several of the furnaces at St. Dizier, and forges at St. Etienne, which have lately only been partially at work, are in full blast, and the anvil's sound is now pretty general—orders having been received for rails and other *materiel*. In the Châtillonais the iron-works are also improving; but, as has been stated before, the great scarcity of money, and want of confidence in the turn that national affairs have taken since February, it will be some time ere mining enterprise will be beneficial to the speculators. In the coal districts of the Loire, Alais, Grand' Combe, Rive de Gier, &c., the working of the pits is beginning on a larger scale; and, notwithstanding the depression which has existed, and still exists, the colliery proprietors have hitherto contributed as much as they possibly could to prevent an outbreak among the men, and assist them and their families, which has had the beneficial effect of causing a sympathetic feeling between master and man during one of the greatest crises that, perhaps, has ever taken place in France. The abandonment by Government (at least for the present) of the *appropriation* of the railways to the state, will, no doubt, induce many of the more wealthy companies to prosecute their lines as far as their funds will allow, which will, consequently, cause a demand for rails, chairs, locomotives, &c.; but, taking the majority of the lines in progress, or projected, throughout France, it will be utterly impossible for them to proceed with their works, without obtaining the pecuniary assistance from the Government. The high price of iron in France, in consequence of the monopoly which has been too long allowed to exist in favour of the iron and forgemasters since the introduction of railways (a great portion of which has been carried out by British capital), is the cause of so many now being in the state they are—insolvency; whereas, had English or Belgium rails and locomotives been admitted at a moderate, although protective, duty, they would have been completed long ago. Notwithstanding the violent outcry of the anti-free trade or protectionist journals against any modification of the tariff in favour of British, and other foreign iron, copper, lead, zinc, coals, machinery, &c., the projects of the late Government of M. de Lamartine, and the present for an alteration in the Custom Laws, will be discussed as soon as they can be presented to the National Assembly, a large portion of which are well known to be supporters of a measure, that will not only be highly beneficial to the general industry of France, but her commercial intercourse with other nations, and that particularly England. The Government is about to enter into some very extensive contracts for British copper for the use of the national navy, and other purposes of shipbuilding; and also for sheet-iron, as soon as a vote of supply can be obtained by the Ministers of Finance and Marine. On the whole, affairs in France are assuming a more healthy appearance.

MINING IN BELGIUM.—An evident improvement has taken place, within the last fortnight, in the mining and forge districts. The armistice which has been entered into between Denmark and Prussia, with respect to the Holstein and Sleswick question, which is looked upon as the forerunner to a treaty of peace, will no doubt lead to highly beneficial results for the mining interest in Belgium, as Germany and Denmark have been large importers of their industry, which the recent events have greatly protracted, as well as those in France. At Seraing, and the district of Liege, the furnaces and forges are resuming a more cheering appearance, and several contracts have been entered into for rails, locomotives, &c.; and it is expected that, in consequence of the project of the French Government of arming 300 battalions of national guards, mobile, and others, extensive orders will be received for supplying them with muskets, swords, &c., which, to the vast establishment of Cockerell and Co., at Seraing, and others in the province of Liege, will find employment to many who have been for some time doing but little.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 13 6—Buddle's West Hartley 14—Davison's West Hartley 14 3—East Adair's Main 12—Hasting's Hartley 14—Holywell Main 14—New Tanfield 12 6—North Percy Hartley 13 6—Original Tanfield 11 6 —Ord's Redheugh 12—Tanfield Moor 13 6—Tanfield Moor Butes 12 6—Townley 13—Wylam 13 3—Wall's End Brown's 13—Framwellgate 14—Gosforth 14 3—Hedworth 13—Hilda 13 9—Northumberland 13 6—Lambton's Primrose 15—Belmont 15—Braddyll's Hetton 15 6—Bell 15—Haswell 16 6—Hetton 16—Keepier 15 6—Lambton 15 9—Morrison 14 3—Russell's Hetton 15 9—Shotton 14 9—Stewart's 16—Caradoc 15 3—Cassop 15—Hudson's Hartlepool 14 6—Heugh Hall 14 3—Kellioe 14 6—Denison 14 3—Seymour Tees 14 6—Tees 15 9—West Hetton 14 3—Cowpen Hartley 14 6—Derwentwater Hartley 14—Powell's Duffryn Steam 20 3.—Ships at market, 106; sold, 75.

WEDNESDAY.—Bate's West Hartley 14—Buddle's West Hartley 14 6—Davison's West Hartley 14 6—East Adair's Main 12—Hasting's Hartley 14—Holywell Main 14 3—New Tanfield 12 6—North Percy Hartley 14—Ord's Redheugh 12 6—Tanfield Moor 13 6—Tanfield Moor Butes 12 6—Townley 13 6—Eden Main 15 3—Powell's Duffryn Steam 20 6—Killingworth 14—Belmont 15 3—Bell 15 3—Haswell 16 3—Hetton 16—Lambton 15 6—Russell's Hetton 15 6—Shotton 15 3—Whitwell 15—Caradoc 15 3—Heugh Hall 14 6—Kellioe 14 9—South Hartlepool 15—Seymour Tees 14 6—Tees 15 9.—Ships, 87; sold, 75.

FRIDAY.—Carr's Hartley 14 3—Adair's Main 12—Hasting's Hartley 14 6—Holywell Main 14 3—North Pontop 11 6—New Tanfield 13 6—Original Tanfield 11—Ord's Redheugh 12 6—Townley 13—Wylam 13 3—West Hartley 14 6—Wall's End Acorn Close 14 6—Northumberland 13 9—Washington 14 3—Eden Main 15 3—Hetton 16 3—Lambton 16—Stewart's 16 3—Caradoc 15 6—Cassop 15 3—Hudson's Hartlepool 15—Kellioe 15—Adelaide 15 6—Tees 16—Hartley 14—Powell's Duffryn Steam 20 6.—Ships at market, 33; sold, 37.

UNION BANK OF AUSTRALIA, 38, Old Broad-street.—The directors having this day declared a dividend of 3 per cent. for the half-year, upon the entire paid-up capital of the bank, free from income-tax, payable on the 1st of August, Notice is hereby given, that the TRANSFER BOOKS will be CLOSED from the 18th inst. until that date. By order of the board, London, July 17, 1848. SAMUEL JACKSON, Secretary. 52

COMMERCIAL BANK OF LONDON.—The directors hereby give Notice, that a DIVIDEND on the paid-up capital, at the rate of £6 per cent. per annum, free of income-tax, for the half-year ending 30th June, 1848, will be PAYABLE at the banking-house of the company, in Lothbury, on and after the 1st of August next. By order of the board, July 18, 1848. A. R. CUTBILL, Manager. 53

EIGHTH REPORT OF THE DIRECTORS OF THE COMMERCIAL BANK OF LONDON,

LOTHBURY, and No. 6, HENRIETTA-STREET, COVENT-GARDEN. 54

DIRECTORS.

JOHN TAYLOR, Esq., Chairman.
THOMAS BARNEWALL, Esq., Deputy-Chairman.

Charles Dickson Archibald, Esq.	Jonathan Hopkinson, Esq.
William Beresford, Esq., M.P.	Edward Oxenford, Esq.
William Sprott Boyd, Esq.	John Savage, Esq.
John Alfred Chowne, Esq.	Joseph Thompson, Esq.
William Cooper, Esq.	Joseph Underwood, Esq.
James Alexander Douglas, Esq.	Richard Walker, Esq., M.P.
Charles Hill, Esq.	Thomas Winkworth, Esq.

SOLICITORS.

Messrs. Amory, Nelson, Travers, and Wyn; and Messrs. Norris and Sons.

The advertisement calling the meeting having been read, the following report from the directors was read by the manager:—

REPORT.

In presenting the eighth annual statement of the affairs of the bank, the directors congratulate the proprietors upon the result of the year's operations; and it is a source of much gratification to find, that they are enabled to continue the dividend of £6 per cent. per annum, and to make a further addition to the guarantee fund, notwithstanding a monetary crisis, more severe in its pressure on the mercantile affairs of the kingdom, than any experienced for many years past.

It will be seen by the annexed balance-sheet, that, after writing off the bad and doubtful debts, and paying the charges and current expenses of the past year, the net profits amount to £11,568 15s. 2d.; out of these profits a dividend, at the rate of 6 per cent. per annum, for the half-year ending 31st Dec., 1847, has been already paid; and the directors have now to declare a dividend for the half-year, ending 30th June, 1848, at the same rate, and as usual, free from income-tax.

After paying this dividend, and deducting rebate of interest upon current bills, there will remain a balance of £2169 13s. 4d. to be added to the reserve fund, increasing that fund, with the addition made during the year, to £17,386 9s.

In compliance with the provisions of the Deed of Settlement, the following directors retire from office—viz.: Edward Cotton, Esq., William Rickford Collett, Esq., James Alexander Douglas, Esq., Edward Oxenford, Esq.—and James Alexander Douglas, Esq., and Edward Oxenford, Esq., being eligible, offer themselves as candidates for re-election; and Charles Hill, Esq., and Thomas Winkworth, Esq., who are duly qualified proprietors, offer themselves as candidates.

COMMERCIAL BANK OF LONDON.

Balance-Sheet, 30th June, 1848.

Capital subscribed	£641,400	0	0
Capital paid up	£128,280	0	0
Guarantee fund, invested in 3 per Cent. Reduced Stock	15,216	15	8
Balances due to the customers of the bank	406,217	13	11
Balance carried down, after deducting bad and doubtful debts, and paying all charges and current expenses	11,568	15	2
Total	£561,283	4	9
Cash in hand, Government securities, bills discounted, &c.	£557,283	4	9
Value of banking premises, fittings, and furniture	4,000	0	0
Total	£561,283	4	9
Dividend, at the rate of 6 per cent. per annum, for the half-year ending 31st Dec., 1847, already paid	£ 3,848	8	0
Ditto at ditto, for the half-year ending 30th June, 1848	3,848	8	0
Rebate of interest on current bills	1,702	5	10
Balance carried to the guarantee fund—making that fund £17,386 9 0	2,169	13	4
Total	£ 11,568	15	2
Balance brought down	£ 11,568	15	2

The report and balance-sheet having been read,—

The chairman, John Taylor, Esq., on the part of the directors, declared a dividend, at the rate of £6 per cent. per annum, free of income-tax, payable on and after the 1st of August next.

Resolved unanimously,—That the report, just read, be approved, printed, and circulated amongst the proprietors.

Resolved unanimously,—That James Alexander Douglas, Esq., be re-elected a director of this company.

Resolved unanimously,—That Edward Oxenford, Esq., be re-elected a director of this company.

Resolved unanimously,—That Charles Hill, Esq., be elected a director of this company.

Resolved unanimously,—That Thomas Winkworth, Esq., be elected a director of this company.

Resolved unanimously,—That the thanks of this meeting be presented to the chairman, deputy-chairman, and directors, for the very able manner in which the affairs of the bank have been conducted by them.

Resolved unanimously,—That the cordial thanks of this meeting be given to Mr. A. R. Cutbill, for his able and zealous services in the management of this bank.

(Signed) JOHN TAYLOR.

The chairman having left the chair, it was

Resolved unanimously,—That the thanks of this meeting be given to John Taylor, Esq., for his able and courteous conduct in the chair this day.

(Signed) THOMAS BARNEWALL, Deputy-Chairman.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.* 55

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

LAP-WELDED IRON TUBES. W. H. RICHARDSON, Jun., and CO., MANUFACTURE every description of WROUGHT-IRON TUBES, for Locomotive and Marine Boilers, Gas, Steam, and other purposes. 56

PATENT TUBE WORKS, *DARLASTON, STAFFORDSHIRE.*

RAILWAY AND OTHER IMPORTANT RECORDS, EFFECTUALLY PROTECTED FROM DAMP AND VERMIN.

Extract from the Appendix to the Second Report of the Commissioners on the Fine Arts.

"In 1839, I superintended the construction of a house, of three stories, on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and internal walls was covered at the level of the internal ground floor with a layer of

SEYSSEL ASPHALTE,* 57

less than half an inch thick, over which coarse sand was spread. Since the above date, no trace of damp has shown itself round the walls of the lower story, which are, for the most part, painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ inches above the external surface of the soil, and only 19¼, at the utmost, above that of the sheet of water. The layer of asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots, indicating the presence of damp, have been since remarked at the base of the door-posts.

The DIRECTORS of the SEYSSEL ASPHALTE COMPANY have much pleasure in recommending to the notice of ENGINEERS and ARCHITECTS the application of the ASPHALTE of SEYSSEL, as the *only effectual* mode of preventing damp in basement floors, and water from percolating through the ARCHES of a VIADUCT.

The arrangements of this company enable works of any extent to be executed with the greatest promptitude. I. FARRELL, Secretary.

SEYSSEL ASPHALTE DEPOT, STANGATE, LONDON.

ESTABLISHED 1838.

* This method has been adopted at the New Houses of Parliament.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 58

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY, 26, *CORNHILL, LONDON.*—Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 59

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age.	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
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